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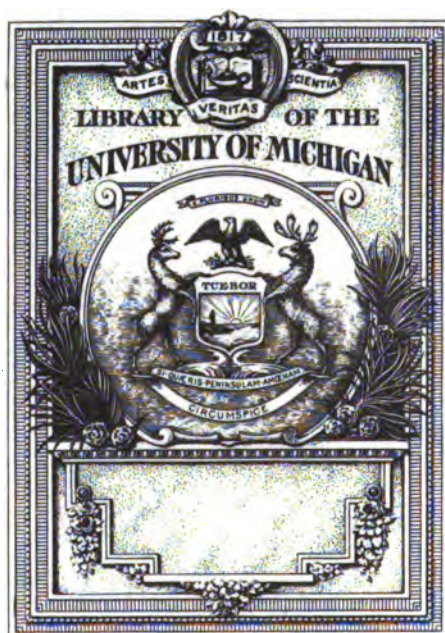
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STATE OF ILLINOIS

Fourth Administrative Report

of the

Directors of Departments

under the

Civil Administrative Code



For the year, July 1, 1920, to June 30, 1921.

[Printed by authority of the State of Illinois.]



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LETTER OF TRANSMITTAL

HONORABLE LEN. SMALL, *Governor:*

The Fourth Annual Report of the Directors of the nine Administrative Departments, covering the period July 1, 1920 to June 30, 1921, is transmitted herewith. Six months of the period covered by the report was under the previous administration and six months under the present administration.

The Directors wish to take this opportunity to express their appreciation for the hearty cooperation and wise counsel which the Executive Department has at all times extended to every branch of the government and which have contributed so much towards successful administration of departmental duties.

Respectfully submitted,

ALBERT C. BOLLINGER, *Director, The Department of Finance.*

BURNS M. DAVISON, *Director, The Department of Agriculture.*

GEORGE B. ARNOLD, *Director, The Department of Labor.*

ROBERT M. MEDILL, *Director, The Department of Mines and Minerals.*

CORNELIUS R. MILLER, *Director, The Department of Public Works and Buildings.*

CHAUNCEY H. JENKINS, *Director, The Department of Public Welfare.*

ISAAC D. RAWLINGS, M. D., *Director, The Department of Public Health.*

GEORGE A. BARR, *Director, The Department of Trade and Commerce.*

WILLIAM H. H. MILLER, *Director, The Department of Registration and Education.*

Report of
THE DEPARTMENT OF FINANCE
From July 1, 1920 to June 30, 1921

THE DEPARTMENT OF FINANCE.

ALBERT C. BOLLINGER, *Director.*

EVERETT H. TRIPP, *Assistant Director.*

ARTHUR E. INGLESB, *Administrative Auditor.*

WILLIAM H. MCCLAIN, *Superintendent of Budget.*

HALBERT O. CREWS, *Superintendent of Department Reports.*

THE STATE TAX COMMISSION.

PERCY B. COFFIN, *Chairman.*

OSCAR E. CARLSTROM, *Member.*

FREDERICK B. ERICKSON, *Member.*

JAMES D. TELFORD, *Member.*

WILLIAM H. MALONE, *Member.*

CHARLES F. RODENBERG, *Statistician.*

DEPARTMENT OF FINANCE.

ALBERT C. BOLLINGER, *Director.*

The following is the fourth annual report of the Department of Finance. It may be useful at this time to include a statement of the organization and duties of the department:

ORGANIZATION.

In the Department of Finance is centered the authority to supervise all expenditures made by the various departments and divisions of State Government; to indicate to the legislature through the budget the amounts required for appropriations, and to collect and publish reports of all departments. The State Tax Commission also is connected with this department for administrative purposes, although the commission is entirely free from departmental regulation in all of its taxing activities.

The officers of the department are a Director, Assistant Director, an Administrative Auditor, a Superintendent of Budget, Superintendent of Reports, five Tax Commissioners and a Statistician.

SUPERVISION OF EXPENDITURES.

For the purpose of supervising expenditures, a uniform system of bookkeeping for ordinary and industrial accounts has been put into operation for the charitable and penal divisions and uniformity of accounting has been established in all other divisions as far as their diversified activities will permit. Uniform forms are used and clerical work is supervised to bring about as nearly correct reports of the financial condition of the departments as possible at the end of each month. Estimates of proposed expenditures by months are required at the beginning of each year. Controlling accounts are kept, by which it is possible to tell what percentage of each estimate for each division has been expended at the close of each month. Figures are made up at the close of each month from reports received, which give in concise detail the results shown by the controlling accounts. Specifications for the purchase of supplies are prescribed for the use of the Superintendent of Purchases and Supplies. Estimates are made to the Governor of the revenue and income of the State at such times as are required by him.

The Administrative Auditor passes upon requisitions for supplies, the plan being for the institutions to submit quarterly estimates covering all their needs which, upon approval, are forwarded to the Department of Public Works and Buildings and distributed for contract to the

Divisions of Purchases and Supplies, Printing, and Architecture and Engineering.

Supplemental requisitions are filed between the quarters, it being the desire of this department to hold the number of such requisitions to the minimum. Coal and some other supplies are requisitioned for on an annual basis and contracts made accordingly.

The Administrative Auditor passes upon all vouchers for the payment of bills of the various administrative departments and they must have his approval. He is guided in this work by the controlling accounts kept by the Department of Finance.

ESTIMATING EXPENDITURES.

The preparation of a biennial budget for submission to the Governor and the General Assembly is begun immediately following the adjournment of the preceding session. An analysis and summary of the appropriation bills passed and a study of the new laws affecting the revenue and financial affairs of the State is made. Throughout the period between sessions vouchers are examined and expenditures sub-classified and detailed records kept of both expenditures and revenue. After the close of the first fiscal year of the biennium blanks are distributed to all spending agencies of the State Government with detailed instructions as to the method of preparing the estimates. These estimates are assembled, compared with expenditures and previous appropriations, and hearings held. In most cases an agreement is reached with the heads of the several offices and departments as to the requests to be made of the General Assembly. The authority arbitrarily to change estimates is occasionally exercised by the Director of Finance, subject to appeal to the Governor.

The budget submitted to the General Assembly is in the form of a detailed statement of the appropriations made by the preceding General Assembly with approved estimates in parallel columns. Explanatory notes are inserted where needed, and actual and estimated income set out.

The budget includes all the income and outgo of the State and recommendations for increased revenue and elimination of over-lapping and duplicating functions.

The budget is submitted to the Governor and by him to the General Assembly, and is used as a basis for action by the appropriation committees of the House and Senate.

PUBLICATION OF REPORTS.

All annual reports of the various administrative departments are collected and published by the Superintendent of Reports. These are issued in one volume, although a limited number of separate reports

are printed for each of the departments and some of the divisions. This method of publishing reports saves much duplication and reduces the cost of printing reports to a minimum.

STATE TAX COMMISSION.

The State Tax Commission was created by an Act of the General Assembly in 1919, taking over the work and having all of the powers of the former State Board of Equalization. The commission is attached to the Department of Finance for administrative purposes, but its administration of the taxing laws of the State is without any regulation or supervision on the part of the department. By an Act of the Fifty-second General Assembly the membership of the commission was increased from three to five.

The commission publishes a detailed annual report of its transactions. Such a report was published covering the assessment of 1920 and may be had on application to the Tax Commission, Springfield.

FINANCIAL REPORTS.

Following are the financial statements of the departments and divisions under the Civil Administrative Code, the military and naval departments, and the several boards and commissions which report to the Department of Finance.

These reports cover the appropriations, expenditures, lapses, and re-appropriations.

The period covered by the following financial reports differs from the period of the report. For the purpose of making a complete and useful statement the appropriations available July 1, 1919, are set up together with the expenditures therefrom extended up to September 30, 1921, on which date unexpended balances lapsed.

DEPARTMENT OF FINANCE.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$56,840	\$49,249	\$7,591
Office expense.....	3,400	2,961	439
Travel.....	4,000	3,128	872
Repairs.....	1,000	164	836
Equipment.....	2,000	1,574	426
Contingent.....	2,000		2,000
Sub-total.....	\$69,240	\$57,076	\$12,164
Printing.....	7,500	7,477	23
Total.....	\$76,740	\$64,553	\$12,187

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF FINANCE—Concluded.

TAX COMMISSION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$49,600	\$39,748	\$ 9,852
Salaries and wages from contingent.....		602	
Office expense.....	6,000	5,937	63
Office expense from contingent.....		2,177	
Travel.....	12,000	4,552	7,448
Repairs from contingent.....		1,215	
Equipment.....	5,000	4,980	20
Equipment from contingent.....		1,524	
Contingent.....	20,000	*(5,518)	14,482
Sub-total.....	\$52,600	\$60,735	\$31,865
Printing.....	20,000	6,657	13,343
Geological survey—Maps and bulletins.....		9,944	—9,944
Waterway bonds.....		3,282	—3,282
Total.....	\$112,600	\$80,618	\$31,982

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

RECAPITULATION.

Salaries and wages.....	\$106,440	\$88,997	\$17,443
Salaries and wages from contingent.....		602	
Office expense.....	9,400	8,898	502
Office expense from contingent.....		2,177	
Travel.....	16,000	7,680	8,320
Repairs.....	1,000	164	836
Repairs from contingent.....		1,215	
Equipment.....	7,000	6,554	446
Equipment from contingent.....		1,524	
Contingent.....	22,000	*(5,518)	16,482
Sub-total.....	\$181,840	\$117,811	\$44,029
Printing.....	27,500	27,360	140
Sub-total.....	\$189,340	\$145,171	\$44,169
Salaries, State officers.....	90,400	87,561	2,839
Total.....	\$279,740	\$232,732	\$47,008

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

FINANCE RESERVE.

Appropriation.	Amount allotted.	Amount lapsed September 30, 1921.
\$500,000	\$398,740	\$101,260

ALLOTMENTS—FINANCE RESERVE.

Game and fish.....	\$ 5,000	Chester State Hospital.....	\$ 8,500
Plant Industry.....	5,000	Dixon State Colony.....	9,000
Mines and Minerals.....	800	Soldiers' Orphans' Home.....	1,000
Fort Massac Park.....	12,000	St. Charles School for Boys.....	31,551
Old Salem Park.....	1,200	Southern Illinois Penitentiary.....	33,000
Starved Rock Park.....	4,689	Western Illinois State Normal School...	5,500
Public Welfare.....	100,000	Adjutant General.....	181,500
Total.....		Total.....	\$398,740

DEPARTMENT OF AGRICULTURE.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages	\$27,240	\$21,316	\$5,924
Office expense	5,000	2,063	2,937
Office expense from contingent		1,721	
Travel	7,000	4,170	2,830
Travel from contingent		506	
Operation	200	198	2
Operation from contingent		60	
Repairs	500	496	4
Repairs from contingent		1,391	
Equipment	2,000	1,001	999
Contingent	4,000	*(3,678)	322
Sub-total	\$45,540	\$32,922	\$13,018
Printing	8,000	6,040	1,960
Total	\$53,540	\$38,962	\$14,978

Receipts from all sources July 1, 1919, to June 30, 1921, \$6.00.

* Not included in total.

SEED INSPECTION.

Salaries and wages	\$16,800	\$16,786	\$ 14
Travel	6,000	3,599	2,401
Equipment	2,500	2,600	
Sub-total	\$25,300	\$22,885	\$2,415
Printing		1,493	—1,493
Total	\$25,300	\$24,378	\$622

Receipts from all sources July 1, 1919, to June 30, 1921, \$606.85.

GAME AND FISH.

Salaries and wages	\$283,000	\$244,239	\$38,761
Office expense	14,000	11,021	2,979
Travel	60,000	58,986	3,014
† Travel emergency	7,000	5,061	1,909
Operation	15,000		
Operation, finance reserve	5,000	19,992	8
† Operation emergency	10,000	9,959	41
Repairs	10,000	9,992	8
Equipment	15,800	15,800	
† Equipment emergency	5,000	5,000	
Permanent improvements	20,000	12,995	7,005
Sub-total	\$444,800	\$391,075	\$53,725
Printing	16,000	14,279	1,721
Total	\$460,800	\$405,354	\$55,446

Receipts from all sources July 1, 1919, to June 30, 1921, \$481,019.75.

† Appropriated by Fifth-second General Assembly.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF AGRICULTURE—Continued.

ANIMAL INDUSTRY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount expended Sept. 30, 1921.
Salaries and wages.....	\$85,410	\$85,277	\$ 9,580
Office expense.....	8,000	6,854	1,106
Travel.....	12,000	10,554	1,484
Operation.....	20,740	6,536	14,384
Repairs.....	300	300	
Equipment.....	1,400	433	965
Eradication of tuberculosis among cattle.....	100,000	98,800	10
Sub-total.....	\$227,850	\$210,261	\$27,700
Printing.....	7,000	7,544	154
Total.....	\$244,850	\$217,805	\$27,854

Receipts from all sources July 1, 1919, to June 30, 1921, \$16,504.64

APIARY INSPECTION.

Salaries and wages.....	\$9,350	\$2,526	\$234
Office expense.....	100	80	79
Travel.....	1,350	1,307	45
Sub-total.....	\$4,800	\$4,913	\$358
Printing.....	300	25	52
Total.....	\$4,500	\$4,888	\$386

Receipts from all sources July 1, 1919, to June 30, 1921, none

PLANT INDUSTRY.

Salaries and wages.....	\$10,300	\$12,700	\$7,700
Office expense.....	800	700	700
Office expense from contingent.....		50	50
Travel.....	7,000	7,000	7,000
Travel from contingent.....		200	200
Operation.....	600	600	600
Repairs.....	100	100	100
Equipment.....	4,000	3,000	3,000
Contingent.....	400	300	300
Disinfecting wheat in Madison County—Finance reserve.....	5,000	4,500	4,500
Sub-total.....	\$45,400	\$46,900	\$27,700
Printing.....	520	520	520
Total.....	\$45,920	\$47,420	\$28,220

Receipts from all sources July 1, 1919, to June 30, 1921 \$217.73

* Not included in total.

THE DEPARTMENT OF FINANCE.

11

DEPARTMENT OF AGRICULTURE—Continued.

FOODS AND DAIRIES.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$194,420	\$146,270	\$48,150
Salaries and wages from contingent.....		1,125	
Office expense.....	26,000	20,376	5,624
Travel.....	82,000	51,624	30,376
Operation.....	500	500	
Operation from contingent.....		161	
Repairs.....	1,000	991	9
Repairs from contingent.....		38	
Equipment.....	2,300	692	1,608
Contingent.....	2,000	*(1,324)	676
Sub-total.....	\$308,220	\$221,777	\$86,443
Printing.....	3,200	5,630	—2,430
Total.....	\$311,420	\$227,407	\$84,013

Receipts from all sources July 1, 1919, to June 30, 1921, \$4,181.00.

* Not included in total.

DAIRY EXTENSION.

Salaries and wages.....	\$18,400	\$17,748	\$652
Office expense.....	2,000	2,000	
Office expense from contingent.....		486	
Travel.....	7,800	7,797	3
Travel from contingent.....		206	
Equipment.....	1,000	1,000	
Equipment from contingent.....		106	
Contingent.....	800	*(798)	2
Sub-total.....	\$30,000	\$29,343	\$657
Printing.....	6,000	5,227	773
Total.....	\$36,000	\$34,570	\$1,430

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

STATE FAIR.

Salaries and wages.....	\$19,040	\$16,937	\$2,103
Salaries and wages from contingent.....		1,425	
Office expense.....	8,480	8,480	
Office expense from contingent.....		5,134	
Travel.....	10,000	7,012	2,988
Operation.....	347,400	347,400	
Operation from contingent.....		7,265	
Repairs.....	50,000	50,000	
Repairs from contingent.....		14,176	
Contingent.....	28,000	*(28,000)	
State aid to county fairs.....	226,000	212,179	7,821
Sub-total.....	\$682,920	\$670,008	\$12,912
Printing.....		461	—461
Total.....	\$682,920	\$670,469	\$12,451

Receipts from all sources July 1, 1919, to June 30, 1921, \$275,094.33.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF AGRICULTURE—Concluded.

COUNTY AGRICULTURAL ADVISORS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$163,200	\$163,200	-----
Total.....	\$163,200	\$163,200	-----

Receipts from all sources July 1, 1919, to June 30, 1921, none.

ILLINOIS FARM COMMISSION.

	Lump sum appropriation		
Office expense.....		\$104	-----
Travel.....		449	-----
Total.....	\$2,000	\$553	\$1,447

Receipts from all sources July 1, 1919, to June 30, 1921, none.

RECAPITULATION.

Salaries and wages.....	\$336,260	\$730,688	\$105,572
Salaries and wages from contingent.....		2,550	-----
Office expense.....	64,380	51,663	12,717
Office expense from contingent.....		7,374	-----
Office expense from lump sum.....		104	-----
Travel.....	200,160	154,902	45,248
Travel from contingent.....		1,078	-----
Travel from lump sum.....		449	-----
Operation.....	399,740	385,185	14,555
Operation from contingent.....		7,486	-----
Repairs.....	61,900	61,878	22
Repairs from contingent.....		15,605	-----
Equipment.....	33,090	29,516	3,574
Equipment from contingent.....		106	-----
Permanent improvements.....	20,000	12,995	7,005
Contingent.....	35,200	*(34,199)	1,001
Miscellaneous.....	325,000	317,145	7,855
Lump sum appropriation.....	2,000	*(553)	1,447
Sub-total.....	\$1,977,720	\$1,778,724	\$198,996
Printing.....	40,620	40,520	400
Sub-total.....	\$2,018,640	\$1,819,244	\$199,396
Salaries, State officers.....	67,800	60,200	7,600
Total.....	\$2,086,440	\$1,879,444	\$206,996

Receipts from all sources July 1, 1919, to June 30, 1921, \$777,630 30.

* Not included in total.

DEPARTMENT OF LABOR.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$18,200	\$17,251	\$949
Salary and wages from contingent.....		236	
Office expense.....	2,000	1,999	1
Office expense from contingent.....		272	
Travel.....	6,000	5,979	21
Travel from contingent.....		1,036	
Repairs.....	200	155	45
Repairs from contingent.....		9	
Equipment.....	600	599	1
Equipment from contingent.....		444	
Contingent.....	2,000	*(1,994)	6
Sub-total.....	\$29,000	\$27,977	\$1,023
Printing.....	1,720	2,728	-1,008
Total.....	\$30,720	\$30,705	\$15

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

REHABILITATION.

Salaries and wages.....		\$5,028	
Office expense.....	Lump sum appropriation	2,861	
Travel.....		1,786	
Equipment.....		316	
Total.....	\$10,000	\$9,991	\$9

Receipts from all sources July 1, 1919, to June 30, 1921, none.

CHICAGO FREE EMPLOYMENT.

Salaries and wages.....	\$124,800	\$102,122	\$22,678
Salaries and wages from contingent.....		190	
Office expense.....	41,200	33,105	8,095
Travel.....	800	666	134
Operation.....	1,250	828	422
Repairs.....	1,000	920	80
Equipment.....	600	541	59
Contingent.....	1,100	*(190)	910
Sub-total.....	\$170,750	\$138,372	\$32,378
Printing.....	2,000	1,722	278
Total.....	\$172,750	\$140,094	\$32,656

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF LABOR—Continued.

EAST ST. LOUIS FREE EMPLOYMENT.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$11,520	\$11,520	-----
Office expense.....	3,000	2,998	2
Office expense from contingent.....	-----	110	-----
Travel from contingent.....	-----	36	-----
Contingent.....	200	*(146)	54
Sub-total.....	\$14,720	\$14,664	\$56
Printing.....	100	102	—2
Total.....	\$14,820	\$14,766	\$54

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

PEORIA FREE EMPLOYMENT.

Salaries and wages.....	\$11,920	\$11,920	-----
Office expense.....	3,000	2,791	209
Travel from contingent.....	-----	21	-----
Contingent.....	200	*(21)	179
Sub-total.....	\$15,120	\$14,732	\$388
Printing.....	100	79	21
Total.....	\$15,220	\$14,811	\$409

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

ROCKFORD FREE EMPLOYMENT.

Salaries and wages.....	\$11,520	\$11,482	\$38
Office expense.....	2,400	2,305	95
Office expense from contingent.....	-----	53	-----
Operation.....	186	186	-----
Equipment from contingent.....	-----	61	-----
Contingent.....	200	*(114)	86
Sub-total.....	\$14,306	\$14,087	\$219
Printing.....	100	98	2
Total.....	\$14,406	\$14,185	\$221

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

ROCK ISLAND-MOLINE FREE EMPLOYMENT.

Salaries and wages.....	\$11,520	\$11,400	\$120
Office expense.....	2,400	1,990	410
Travel from contingent.....	-----	22	-----
Contingent.....	200	*(22)	178
Sub-total.....	\$14,120	\$13,412	\$708
Printing.....	100	67	33
Total.....	\$14,220	\$13,479	\$741

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

15

DEPARTMENT OF LABOR—Continued.

SPRINGFIELD FREE EMPLOYMENT.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$11,520	\$11,520	-----
Office expense.....	3,000	2,967	43
Travel from contingent.....	-----	58	-----
Contingent.....	200	*(58)	142
Sub-total.....	\$14,720	\$14,535	\$185
Printing.....	100	123	—23
Total.....	\$14,820	\$14,658	\$162

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

GENERAL ADVISORY BOARD.

Salaries and wages.....	\$6,000	\$5,622	\$ 378
Office expense.....	700	225	475
Travel.....	2,000	956	1,044
Sub-total.....	\$8,700	\$6,803	\$1,897
Printing.....	150	17	133
Total.....	\$8,850	\$6,820	\$2,030

Receipts from all sources July 1, 1919, to June 30, 1921, none.

PRIVATE EMPLOYMENT AGENCIES.

Salaries and wages.....	\$30,600	\$30,184	\$416
Office expense.....	4,000	3,374	626
Travel.....	800	654	146
Equipment.....	200	-----	200
Sub-total.....	\$35,600	\$34,212	\$1,388
Printing.....	400	207	193
Total.....	\$36,000	\$34,419	\$1,581

Receipts from all sources July 1, 1919, to June 30, 1921, \$30,550.00.

FACTORY INSPECTION.

Salaries and wages.....	\$152,160	\$141,871	\$10,289
Office expense.....	16,200	13,903	2,297
Travel.....	30,000	25,247	4,753
Operation.....	600	112	488
Repairs.....	800	543	257
Equipment.....	800	281	519
Sub-total.....	\$200,560	\$181,957	\$18,603
Printing.....	3,280	3,179	101
Total.....	\$203,840	\$185,136	\$18,704

Receipts from all sources July 1, 1919, to June 30, 1921, \$38.38.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF LABOR—Continued.

INDUSTRIAL COMMISSION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$234,040	\$217,108	\$16,932
Office expense.....	30,440		
†Office expense, emergency.....	3,750	34,135	55
Travel.....	36,000	35,990	10
Operation.....	400	279	121
Repairs.....	400		
†Repairs, emergency.....	1,800	1,727	473
Equipment.....	4,000		
†Equipment, emergency.....	3,450	7,383	67
Sub-total.....	\$314,280	\$296,622	\$17,658
Printing.....	9,900	9,793	107
Total.....	\$324,180	\$306,415	\$17,765

Receipts from all sources July 1, 1919, to June 30, 1921, \$4,178.15.

† Appropriated by Fifty-second General Assembly.

DECATUR FREE EMPLOYMENT.

Salaries and wages.....	\$9,000	\$8,922	\$ 78
Salaries and wages from contingent.....		75	
Office expense.....	2,475	2,185	290
Office expense from contingent.....		3	
Travel from contingent.....		26	
Operation.....	500	72	428
Repairs.....	25		25
Equipment.....	200	197	3
Equipment from contingent.....		18	
Contingent.....	200	*(122)	78
Sub-total.....	\$12,400	\$11,498	\$902
Printing.....	50	9	41
Total.....	\$12,450	\$11,507	\$943

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

DANVILLE FREE EMPLOYMENT.

Salaries and wages.....	\$9,000	\$8,935	\$ 65
Office expense.....	2,475	754	1,721
Travel from contingent.....		22	
Operation.....	500	64	436
Repairs.....	25	14	11
Repairs from contingent.....		55	
Equipment.....	200	104	96
Contingent.....	200	*(77)	123
Sub-total.....	\$12,400	\$9,948	\$2,452
Printing.....	50	7	43
Total.....	\$12,450	\$9,955	\$2,495

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF LABOR—Continued.

BLOOMINGTON FREE EMPLOYMENT.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$9,000	\$7,490	\$1,510
Office expense.....	2,475	1,656	819
Travel from contingent.....		12	
Operation.....	500	6	494
Repairs.....	25		25
Equipment.....	200	101	99
Contingent.....	200	*(12)	188
Sub-total.....	\$12,400	\$9,265	\$3,135
Printing.....	50	3	47
Total.....	\$12,450	\$9,268	\$3,182

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

JOLIET FREE EMPLOYMENT.

Salaries and wages.....	\$9,000	\$8,800	\$200
Office expense.....	2,475	2,401	74
Office expense from contingent.....		106	
Travel from contingent.....		3	
Operation.....	500		500
Repairs.....	25		25
Equipment.....	200		200
Contingent.....	200	*(109)	91
Sub-total.....	\$12,400	\$11,310	\$1,090
Printing.....	50	3	47
Total.....	\$12,450	\$11,313	\$1,137

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

AURORA FREE EMPLOYMENT.

Salaries and wages.....	\$9,000	\$7,883	\$1,117
Office expense.....	2,475	1,562	913
Operation.....	500	3	497
Repairs.....	25	2	23
Equipment.....	200	42	158
Contingent.....	200		200
Sub-total.....	\$12,400	\$9,492	\$2,908
Printing.....	50	19	31
Total.....	\$12,450	\$9,511	\$2,939

Receipts from all sources July 1, 1919, to June 30, 1921, none.

CHICAGO FREE EMPLOYMENT (COLORED).

Salaries and wages.....	\$9,000	\$8,518	\$482
Office expense.....	2,475	2,473	2
Operation.....	500	472	28
Repairs.....	25		25
Equipment.....	200	155	45
Equipment from contingent.....		167	
Contingent.....	200	*(167)	33
Total.....	\$12,400	\$11,785	\$615

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF LABOR—Concluded.

TWO ADDITIONAL FREE EMPLOYMENT OFFICES—(NOT ESTABLISHED).

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$18,000	-----	\$18,000
Office expense.....	4,950	-----	4,950
Operation.....	1,000	-----	1,000
Repairs.....	50	-----	50
Equipment.....	400	-----	400
Contingent.....	400	-----	400
Total.....	\$24,800	-----	\$24,800

RECAPITULATION.

Salaries and wages.....	\$695,800	\$622,548	\$73,252
Salaries and wages from contingent.....		501	-----
Salaries and wages from lump sum.....		5,028	-----
Office expense.....	131,890	110,813	21,077
Office expense from contingent.....		544	-----
Office expense from lump sum.....		2,861	-----
Travel.....	75,600	69,492	6,108
Travel from contingent.....		1,236	-----
Travel from lump sum.....		1,786	-----
Operation.....	6,436	2,022	4,414
Repairs.....	4,400	3,361	1,039
Repairs from contingent.....		61	-----
Equipment.....	11,250	9,403	1,847
Equipment from contingent.....		690	-----
Equipment from lump sum.....		316	-----
Contingent.....	5,700	*(3,032)	2,668
Lump sum appropriation.....	10,000	*(9,991)	9
Sub-total.....	\$941,076	\$830,662	\$110,414
Printing.....	18,200	18,156	44
Sub-total.....	\$959,276	\$848,818	\$110,458
Salaries, State officers.....	84,000	84,000	-----
Total.....	\$1,043,276	\$932,818	\$110,458

Receipts from all sources July 1, 1919, to June 30, 1921, \$34,766.53.

* Not included in total.

DEPARTMENT OF MINES AND MINERALS.

GENERAL OFFICE.

Salaries and wages.....	\$23,560	\$23,472	\$ 88
Salaries and wages from contingent.....		254	-----
Office expense.....	4,420	4,231	189
Office expense from contingent.....		384	-----
Travel.....	12,500	7,795	4,705
Repairs.....	1,000	1,566	566
Equipment.....	525	470	55
Contingent.....	2,500	*(638)	1,862
Sub-total.....	\$44,505	\$38,172	\$6,333
Printing.....	9,000	8,589	411
Total.....	\$53,505	\$46,761	\$6,744

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

DEPARTMENT OF MINES AND MINERALS—Continued.

INSPECTION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$62,400	\$62,200	\$200
Travel.....	30,000	29,829	971
Travel, finance reserve.....	800		
Repairs.....	700	342	358
Equipment.....	25	20	5
Total.....	\$93,925	\$92,391	\$1,534

Receipts from all sources July 1, 1919, to June 30, 1921, none.

MINE RESCUE.

Salaries and wages.....	\$30,400	\$28,602	\$1,798
Office expense.....	3,600	3,787	—187
Office expense from contingent.....		788	
Travel.....	1,000	6,920	—5,920
Operation.....	5,800	5,791	9
Operation from contingent.....		3,568	
Repairs.....	6,000	5,612	388
Equipment.....	200	59	141
Contingent.....	2,500	*(4,356)	—1,856
Total.....	\$49,500	\$55,127	—\$5,627

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

MINER'S EXAMINATION.

Travel.....	\$9,600	\$9,355	\$245
Total.....	\$9,600	\$9,355	\$245

Receipts from all sources July 1, 1919, to June 30, 1921, \$25,836.00.

ECONOMIC INVESTIGATION.

Salaries and wages.....	\$4,800	\$4,800	
Travel.....	2,400	2,374	\$26
Equipment.....	125	123	2
Total.....	\$7,325	\$7,297	\$28

Receipts from all sources July 1, 1919 to June 30, 1921, none.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF MINES AND MINERALS—Concluded.

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$121,160	\$119,074	\$2,086
Salaries and wages from contingent.....		254	
Office expense.....	8,020	8,018	2
Office expense from contingent.....		1,172	
Travel.....	56,300	56,273	27
Operation.....	5,800	5,791	9
Operation from contingent.....		3,568	
Repairs.....	7,700	7,520	180
Equipment.....	875	872	203
Contingent.....	5,000	*(4,994)	6
Sub-total.....	\$204,855	\$202,342	\$2,513
Printing.....	9,000	8,589	411
Sub-total.....	\$213,855	\$210,931	\$2,924
Salaries, State officers.....	34,400	33,282	1,118
Total.....	\$248,255	\$244,213	\$4,042

Receipts from all sources July 1, 1919, to June 30, 1921, \$25,836.00.

* Not included in total.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS.

GENERAL OFFICE.

Salaries and wages.....	\$23,000	\$23,000	
Salaries and wages from contingent.....		530	
Office expense.....	2,400	2,384	\$ 16
Office expense from contingent.....		239	
Travel.....	6,000	4,967	1,033
Operation from contingent.....		601	
Repairs.....	400	316	84
Repairs from contingent.....		160	
Equipment.....	500	483	17
Equipment from contingent.....		489	
Contingent.....	2,000	*(1,999)	1
Sub-total.....	\$34,300	\$33,149	\$1,151
Printing.....	2,000	1,472	528
Total.....	\$36,300	\$34,621	\$1,679

Receipts from all sources July 1, 1919, to June 30, 1921, \$1.06.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

GENERAL OFFICE—MISCELLANEOUS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Armory at Danville.....	\$165,000	\$ 30,930		\$134,070
Centennial Memorial Building.....	986,793	986,793		
†Centennial Memorial Building—Emergency.....	914,500	21,912		892,588
Ft. Creve Couer Marker.....	1,500	1,359	141	
Housing Code.....	10,000	4,001	5,996	
Monument to Edward Coles.....	5,000			5,000
Monument to John M. Palmer.....	35,000	10,061		24,939
Monument to Richard Yates.....	35,000	10,071		24,929
State House at Vandalia.....	60,000	60,000		
Novaculite Road.....	125,000		125,000	
Total.....	\$2,337,793	\$1,125,127	\$131,140	\$1,061,526

Receipts from all sources July 1, 1919, to June 30, 1921, \$57.60.

† Appropriated by Fifty-second General Assembly.

PURCHASES AND SUPPLIES.

Salaries and wages.....	\$47,180	\$45,345	\$1,815
Office expense.....	10,400	8,535	1,865
Travel.....	6,000	1,039	4,961
Equipment.....	1,500	759	741
Sub-total.....	\$65,080	\$55,678	\$9,382
Printing.....	6,000	5,162	838
Total.....	\$71,080	\$60,840	\$10,220

Receipts from all sources July 1, 1919, to June 30, 1921, \$453.15.

ARCHITECTURE.

Salaries and wages.....	\$49,260	\$44,838	\$4,422
Office expense.....	8,800	8,799	1
Office expense from contingent.....		861	
Travel.....	9,000	9,000	
Travel from contingent.....		1,093	
Repairs.....	550	550	
Repairs from contingent.....		42	
Equipment.....	1,750	1,618	132
Contingent.....	2,000	*(1,996)	4
Sub-total.....	\$71,360	\$66,801	\$4,559
Printing.....	4,600	5,614	—1,014
Total.....	\$75,960	\$72,415	\$3,545

Receipts from all sources July 1, 1919, to June 30, 1921, \$41.40.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

ENGINEERING.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$40,960	\$39,373	\$1,587
Office expense.....	6,000	5,909	91
Office expense from contingent.....		2,000	
Travel.....	8,000	3,758	4,242
Repairs.....	300	155	145
Equipment.....	2,125	578	1,547
Contingent.....	2,000	*(2,000)	
Sub-total.....	\$59,385	\$51,773	\$7,612
Printing.....	1,900	2,389	—489
Total.....	\$61,285	\$54,162	\$7,123

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

PARKS.

Salaries and wages from contingent.....		\$1,415	
Office expense.....	\$ 100	85	\$ 15
Office expense from contingent.....		3	
Travel.....	1,000	861	139
Operation from contingent.....		143	
Repairs from contingent.....		428	
Equipment from contingent.....		11	
Contingent.....	2,000	*(2,000)	
Sub-total.....	\$3,100	\$2,946	\$154
Printing.....	1,775	1,770	5
Total.....	\$4,875	\$4,716	\$159

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

LINCOLN MONUMENT.

Salaries and wages.....	\$5,210	\$5,046	\$164
Office expense.....	400	399	1
Operation.....	1,300	1,296	4
Repairs.....	4,100	3,994	106
Permanent improvements.....	1,500	1,111	389
Sub-total.....	\$12,510	\$11,846	\$664
Printing.....	100	275	—175
Total.....	\$12,610	\$12,121	\$489

Receipts from all sources July 1, 1919, to June 30, 1921, none.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

LINCOLN HOMESTEAD.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$3,000	\$3,000	-----
Salaries and wages from contingent.....	-----	300	-----
Office expense.....	260	253	\$7
Operation.....	460	459	1
Repairs.....	1,000	999	1
Contingent.....	300	*(300)	-----
Sub-total.....	\$5,020	\$5,011	\$ 9
Printing.....	20	-----	20
Total.....	\$5,040	\$5,011	\$29

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

PARKS—FORT MASSAC.

Salaries and wages.....	\$1,920	\$1,866	\$ 54
Office expense.....	250	250	-----
Operation.....	400	400	-----
Repairs.....	200	200	-----
Sea Wall—Finance reserve.....	12,000	8,776	3,224
Sub-total.....	\$14,770	\$11,492	\$3,278
Printing.....	20	-----	20
Total.....	\$14,790	\$11,492	\$3,298

Receipts from all sources July 1, 1919, to June 30, 1921, none.

PARKS—STARVED ROCK.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Salaries and wages.....	\$5,000	\$4,990	\$10	-----
Salaries and wages from contingent.....	-----	88	-----	-----
Office expense.....	200	200	-----	-----
Operation.....	300	298	2	-----
Operation from contingent.....	-----	813	-----	-----
Repairs.....	6,500	6,498	2	-----
Repairs from contingent.....	-----	98	-----	-----
†Repairs, emergency.....	8,000	70	-----	\$7,930
Permanent improvements.....	30,000	30,000	-----	-----
Land, finance reserve.....	4,689	4,689	-----	-----
Contingent.....	1,000	*(999)	1	-----
Sub-total.....	\$55,689	\$47,744	\$15	\$7,930
Printing.....	40	25	15	-----
Total.....	\$55,729	\$47,769	\$30	\$7,930

Receipts from all sources July 1, 1919, to June 30, 1921, \$18,978.73.

* Not included in total. † Appropriated by Fifty-second General Assembly.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

PARKS—FORT CHARTRES.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Permanent improvements.....	\$12,054	\$12,039	\$15
Total.....	\$12,054	\$12,039	\$15

Receipts from all sources July 1, 1919, to June 30, 1921, \$404.40.

PARKS—DOUGLAS MONUMENT.

Salaries and wages.....	\$ 2,400	\$ 2,082	\$318
Permanent improvements.....	15,000	14,996	4
Total.....	\$17,400	\$17,078	\$322

Receipts from all sources July 1, 1919, to June 30, 1921, none.

PARKS—OLD SALEM.

Salaries and wages.....	\$ 2,200	\$ 1,503	\$ 697
Office expense.....	600	128	472
Travel.....		3	—3
Operation.....	1,300	839	461
Equipment, septic tank included.....	600		
Equipment, finance reserve.....	1,200	3,723	—1,923
Permanent improvements.....	25,300	25,000	300
†Museum emergency.....	5,000	5,000	
Total.....	\$36,200	\$36,196	\$4

Receipts from all sources July 1, 1919, to June 30, 1921, none.

† Appropriated by 52d General Assembly.

PRINTING.

Salaries and wages.....	\$51,900	\$51,900	
Salaries and wages from contingent.....		1,675	
Office expense.....	2,800	2,800	
Office expense from contingent.....		128	
Travel.....	500	481	19
Repairs.....	700	665	35
Repairs from contingent.....		6	
Equipment.....	1,500	1,491	9
Equipment from contingent.....		177	
Contingent.....	2,000	*(1,986)	14
Sub-total.....	\$59,400	\$59,323	\$77
Printing.....	3,975	3,964	11
Total.....	\$63,375	\$63,287	\$88

Receipts from all sources July 1, 1919, to June 30, 1921, \$1,792.99.

Printing, binding and stationery—			
For officers, departments, institutions.....	\$316,260	\$391,604	\$—75,344
For Fifty-second General Assembly.....	165,000	43,604	121,396
Total.....	\$481,260	\$435,208	\$46,052

* Not included in total.

THE DEPARTMENT OF FINANCE.

25

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

WATERWAYS—GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$ 3,600	\$ 3,233	\$ 367
Office expense.....	7,000	6,956	44
Office expense from contingent.....		1,090	
Travel.....	6,000	5,107	893
Operation from contingent.....		11	
Repairs from contingent.....		65	
Equipment.....	500	479	21
Equipment from contingent.....		172	
Contingent.....	2,000	*(1,338)	662
Removing tax deeds.....	4,279	4,279	
Special assessments.....	4,263	4,263	
Flood waters and sewage.....	16,500	15,834	666
Sub-total.....	\$44,142	\$41,489	\$2,653
Printing.....	2,000	2,528	—628
Total.....	\$46,142	\$44,017	\$2,125

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

WATERWAYS—ENGINEERING SERVICES.

Salaries and wages.....		\$102,855	
Office expense.....		10,751	
Travel.....	Lump sum	9,038	
Operation.....	appropriation	1,999	
Repairs.....		9,742	
Equipment.....		5,550	
Total.....	\$140,000	\$139,935	\$65

Receipts from all sources July 1, 1919, to June 30, 1921, none.

WATERWAYS—STREAM GAUGING.

Salaries and wages.....		\$5,787	
Office expense.....	Lump sum	17	
Travel.....	appropriation	915	
Repairs.....			
Total.....	\$7,000	\$6,719	\$281

Receipts from all sources July 1, 1919, to June 30, 1921, none.

WATERWAYS—MAINTENANCE OF NAVIGATION.

Salaries and wages.....		\$19,956	
Office expense.....		79	
Travel.....	Lump sum	901	
Operation.....	appropriation	1,356	
Repairs.....		6,544	
Equipment.....		21	
Total.....	\$30,000	\$28,857	\$1,143

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

WATERWAYS—SURVEYS AND INVESTIGATIONS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	Lump sum appropriation	\$48,060	-----
Office expense.....		3,169	-----
Travel.....		7,560	-----
Operation.....		1	-----
Repairs.....		518	-----
Equipment.....		690	-----
Total.....	\$60,000	\$59,998	\$2

Receipts from all sources July 1, 1919, to June 30, 1921, none.

WATERWAYS—ILLINOIS AND MICHIGAN CANAL.

Salaries and wages.....	Lump sum appropriation	\$53,839	-----
Office expense.....		2,854	-----
Travel.....		4,059	-----
Operation.....		2,069	-----
Repairs.....		16,342	-----
Equipment.....		14	-----
Land.....		395	-----
Total.....	\$100,000	\$79,672	\$20,328

Receipts from all sources July 1, 1919, to June 30, 1921, \$83,135.42.

WATERWAY CONSTRUCTION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriation.
Waterway construction.....	\$20,000,000	\$303,914	-----	\$19,696,086
Total.....	\$20,000,000	\$303,914	-----	\$19,696,086

Receipts from all sources July 1, 1919, to June 30, 1921, none.

HIGHWAYS.

Salaries and wages.....	\$86,680	\$93,225	\$3,455	-----
Office expense.....	44,000	43,999	1	-----
Travel.....	30,000	29,970	30	-----
Operation.....	7,000	5,713	1,287	-----
Repairs.....	12,700	10,671	2,029	-----
Equipment.....	7,400	7,396	4	-----
Highway construction and maintenance.....	29,363,812	24,258,153	4,866,331	\$239,328
Sub-total.....	\$29,551,592	\$24,439,127	\$4,873,137	\$239,328
Printing.....	27,250	26,460	790	-----
Total.....	\$29,578,842	\$24,465,587	\$4,873,927	\$239,328

Receipts from all sources July 1, 1919, to June 30, 1921, \$177,843.41.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Continued.

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriation.
Salaries and wages.....	\$ 322,200	\$ 309,401	\$ 12,889	-----
Salaries and wages from contingent.....		4,008		-----
Salaries and wages from lump sum.....		230,497		-----
Office expense.....	83,210	80,697	2,513	-----
Office expense from contingent.....		4,321		-----
Office expense from lump sum.....		16,970		-----
Travel.....	\$6,500	55,186	11,314	-----
Travel from contingent.....		1,093		-----
Travel from lump sum.....		22,473		-----
Operation.....	10,760	9,005	1,755	-----
Operation from contingent.....		1,568		-----
Operation from lump sum.....		5,425		-----
Repairs.....	34,380	24,048	2,402	\$ 7,930
Repairs from contingent.....		799		-----
Repairs from lump sum.....		33,146		-----
Equipment.....	17,075	16,527	548	-----
Equipment from contingent.....		829		-----
Equipment from lump sum.....		6,275		-----
Permanent improvements.....	2,423,647	1,213,048	129,073	1,081,526
Land.....	4,689	4,689		-----
Land from lump sum.....		385		-----
Contingent.....	13,300	*(12,618)	682	-----
Highway construction and maintenance.....	29,363,812	24,258,153	4,866,331	239,328
Waterway construction.....	20,000,000	303,914		19,696,086
Miscellaneous.....	40,112	33,447	6,665	-----
Lump sum appropriations.....	337,000	*(315,181)	21,819	-----
Sub-total.....	\$52,716,775	\$26,635,914	\$5,055,991	\$21,024,870
Printing.....	49,680	49,659	21	-----
Sub-total.....	\$52,766,455	\$26,685,573	\$5,056,012	\$21,024,870
Salaries, State officers.....	93,000	93,000		-----
Total.....	\$52,859,455	\$26,778,573	\$5,056,012	\$21,024,870

Receipts from all sources July 1, 1919, to June 30, 1921, \$282,708.16.

* Not included in total.

PRINTING AND STATIONERY—ALL DEPARTMENTS.

Printing, binding and stationery— For offices, departments, institutions.....	\$316,260	\$391,604	—\$ 75,344	-----
For Fifty-second General Assembly.....	165,000	43,604	121,396	-----
Total.....	\$981,260	\$935,208	\$46,052	-----

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—Concluded.

The difference between the "Bills Paid" in the above and the "Amount Charged" to the different officers, etc., for printing and stationery in the following table, represents additions to stock on hand not yet distributed:

Department.	Appropriation.	Amount charged.	Balance.
Adjutant General.....	\$ 13,000	\$ 11,588	\$ 1,412
Agriculture.....	40,920	40,520	400
Appellate Court, 1st District.....	2,800	2,730	70
Appellate Court, 2d District.....	800	751	49
Appellate Court, 3d District.....	1,600	1,479	121
Appellate Court, 4th District.....	660	620	40
Attorney General.....	25,000	24,997	3
Auditor of Public Accounts.....	50,000	49,616	384
Civil Service.....	10,000	9,824	176
Farmers' Institute.....	32,000	31,335	665
Finance.....	27,500	27,360	140
Governor.....	2,000	1,995	5
Historical Library.....	20,400	20,397	3
Illinois Teachers' Association.....	5,000	3,110	1,890
Labor.....	18,200	18,156	44
State Library.....	4,000	2,674	1,326
Library Extension Commission.....	2,000	1,991	9
Legislative Reference Bureau.....	11,000	10,330	670
Lieutenant Governor.....	500	496	4
Mines and Minerals.....	9,000	8,589	411
Public Health.....	35,000	34,087	913
Public Welfare.....	60,000	59,999	1
Public Works and Buildings.....	49,680	49,659	21
Registration and Education.....	58,200	57,953	247
Secretary of State.....	175,000	174,994	6
Clerk of Supreme Court.....	4,400	4,277	123
Superintendent of Public Instruction.....	60,000	56,729	3,271
Trade and Commerce.....	90,500	84,229	6,271
Treasurer.....	6,000	5,973	27
Uniform Laws Commission.....	400	86	314
Pension Laws Commission.....	700	656	60
House of Representatives.....	82,500	24,584	57,916
Senate.....	82,500	28,351	54,149
Total.....	\$981,260	\$850,129	\$131,131

DEPARTMENT OF PUBLIC WELFARE.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriation.
Salaries and wages.....	\$ 99,500	\$ 72,415	\$27,085	-----
Salaries and wages, finance reserve.....	1,914	-----	1,914	-----
Office expense.....	8,400	7,478	922	-----
Travel.....	20,000	19,975	25	-----
Operation.....	350	71	279	-----
Repairs.....	1,700	1,671	29	-----
Equipment.....	3,400	3,262	138	-----
Rehabilitation survey.....	10,000	10,000	-----	-----
Excess cost educating deaf, blind and dumb children.....	389,560	295,146	94,414	-----
Buildings and equipment at State Hospitals.....	300,000	34,483	-----	\$265,517
Sub-total.....	\$834,824	\$444,501	\$124,806	\$265,517
Printing.....	29,367	9,633	19,734	-----
Total.....	\$864,191	\$454,034	\$144,540	\$265,517

Receipts from all sources July 1, 1919, to June 30, 1921, \$339.65.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF PUBLIC WELFARE—Continued.

ELGIN STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$385,260	\$385,107	\$ 153
Office expense.....	5,600	4,220	1,380
Travel.....	6,000	4,108	1,892
Travel from contingent.....		11	
Operation.....	461,328	461,328	
Operation from contingent.....		119	
Operation and repairs deficiency.....	170,400	169,949	451
Operation and repairs deficiency from contingent.....		1,887	
Repairs.....	75,396	73,546	1,850
Equipment.....	5,950	5,582	368
Permanent improvements.....	157,500	154,839	2,661
Contingent.....	2,000	*(2,000)	
Sub-total.....	\$1,269,434	\$1,260,679	\$8,755
Printing.....	1,400	1,741	—341
Total.....	\$1,270,834	\$1,262,420	\$8,414

Receipts from all sources July 1, 1919, to June 30, 1921, \$23,083.97.

* Not included in total.

KANKAKEE STATE HOSPITAL.

Salaries and wages.....	\$604,016	\$601,371	\$2,645
Salaries and wages, finance reserve.....	28,594	28,594	
Office expense.....	8,700	6,761	1,939
Travel.....	11,140	1,667	9,473
Travel from contingent.....		307	
Operation.....	767,115	767,115	
Operation from contingent.....		1,328	
Operation and repairs deficiency.....	236,900	236,619	281
Repairs.....	155,958	155,948	10
Repairs from contingent.....		297	
Equipment.....	5,960	5,919	41
Equipment from contingent.....		66	
Permanent improvements.....	30,800	29,847	953
Contingent.....	2,000	*(1,998)	2
Sub-total.....	\$1,851,183	\$1,835,839	\$15,344
Printing.....	1,800	3,663	—1,863
Total.....	\$1,852,983	\$1,839,522	\$13,451

Receipts from all sources July 1, 1919, to June 30, 1921, \$28,624.35.

* Not included in total.

PSYCHOPATHIC INSTITUTE.

Salaries and wages.....	\$136,692	\$136,401	\$291
Salaries and wages from contingent.....		3	
Office expense.....	1,950	1,928	22
Office expense from contingent.....		263	
Travel.....	4,700	4,646	54
Travel from contingent.....		221	
Operation.....	1,800	1,781	19
Operation from contingent.....		243	
Repairs.....	1,300	1,229	71
Equipment.....	2,200	2,134	66
Equipment from contingent.....		214	
Contingent.....	1,000	*(974)	26
Sub-total.....	\$149,642	\$149,093	\$549
Printing.....	1,535	2,063	—548
Total.....	\$151,177	\$151,176	\$1

Receipts from all sources July 1, 1919, to June 30, 1921, \$98.49.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

JACKSONVILLE STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriation.
Salaries and wages.....	\$392,322	\$391,623	\$ 699	-----
Office expense.....	5,200	3,767	1,433	-----
Travel.....	6,000	2,334	3,666	-----
Travel from contingent.....		17		-----
Operation.....	406,487	406,487		-----
Operation from contingent.....		189		-----
Operation and repairs, deficiency.....	124,700	124,616	84	-----
Repairs.....	66,488	66,486	2	-----
Repairs from contingent.....		1,453		-----
Equipment.....	3,925	3,888	37	-----
Permanent improvements.....	53,000	52,983	17	-----
Land.....	40,000			\$40,000
Contingent.....	2,000	*(1,659)	341	-----
Sub-total.....	\$1,100,122	\$1,053,843	\$6,279	\$40,000
Printing.....	1,800	1,980	—180	-----
Total.....	\$1,101,922	\$1,055,823	\$6,099	\$40,000

Receipts from all sources July 1, 1919, to June 30, 1921, \$28,230.35.

* Not included in total.

ANNA STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$385,704	\$384,599	\$1,105
Office expense.....	5,200	3,419	1,781
Office expense from contingent.....		23	
Travel.....	5,800	895	4,905
Travel from contingent.....		244	
Operation.....	399,881	399,881	
Operation from contingent.....		1,519	
Operation and repairs, deficiency.....	91,400	91,186	214
Repairs.....	59,592	59,592	
Repairs from contingent.....		118	
Equipment.....	2,950	2,919	31
Permanent improvements.....	118,000	114,550	3,450
Contingent.....	2,000	*(1,904)	96
Sub-total.....	\$1,070,527	\$1,058,945	\$11,582
Printing.....	1,400	2,039	—639
Total.....	\$1,071,927	\$1,060,984	\$10,943

Receipts from all sources July 1, 1919, to June 30, 1921, \$21,049.42.

* Not included in total.

DEPARTMENT OF PUBLIC WELFARE—Continued.

WATERTOWN STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed. Sept. 30, 1921.
Salaries and wages.....	\$352,578	\$352,369	\$ 209
Salaries and wages, finance reserve.....	16,931	16,931	—
Salaries and wages from contingent.....	—	10	—
Office expense.....	4,000	2,442	1,558
Travel.....	5,680	804	4,876
Travel from contingent.....	—	93	—
Operation.....	364,858	364,858	—
Operation from contingent.....	—	1,864	—
Operation and repairs, deficiency.....	126,200	126,058	142
Repairs.....	53,192	53,192	—
Equipment.....	4,700	4,691	9
Equipment from contingent.....	—	33	—
Permanent improvements.....	72,500	66,621	5,879
Contingent.....	2,000	*(2,000)	—
Sub-total.....	\$1,002,639	\$989,966	\$12,673
Printing.....	1,200	1,588	—388
Total.....	\$1,003,839	\$991,554	\$12,285

Receipts from all sources July 1, 1919, to June 30, 1921, \$14,223.64.

* Not included in total.

PEORIA STATE HOSPITAL.

Salaries and wages.....	\$409,640	\$409,378	\$ 262
Office expense.....	5,200	2,210	2,990
Office expense from contingent.....	—	85	—
Travel.....	5,536	351	5,185
Travel from contingent.....	—	198	—
Operation.....	579,909	579,909	—
Operation from contingent.....	—	1,699	—
Operation and repairs, deficiency.....	111,000	110,813	187
Repairs.....	92,206	92,001	205
Repairs from contingent.....	—	3	—
Equipment.....	5,400	4,823	577
Equipment from contingent.....	—	14	—
Permanent improvements.....	9,300	7,191	2,109
Contingent.....	2,000	*(1,999)	1
Sub-total.....	\$1,220,191	\$1,208,675	\$11,516
Printing.....	1,200	1,404	—204
Total.....	\$1,221,391	\$1,210,079	\$11,312

Receipts from all sources July 1, 1919, to June 30, 1921, \$11,046.78.

* Not included in total.

CHESTER STATE HOSPITAL.

Salaries and wages.....	\$61,190	\$61,046	\$ 144
Office expense.....	800	638	162
Travel.....	700	561	139
Travel from contingent.....	—	98	—
Operation.....	60,400	60,400	—
Operation from contingent.....	—	901	—
Operation and repairs, deficiency.....	22,300	21,878	422
Repairs.....	5,552	4,363	1,189
Equipment.....	600	600	—
Contingent.....	1,000	*(999)	1
Retaining wall, finance reserve.....	8,500	8,478	22
Sub-total.....	\$161,042	\$158,963	\$2,079
Printing.....	200	415	—215
Total.....	\$161,242	\$159,378	\$1,864

Receipts from all sources July 1, 1919, to June 30, 1921, \$743.97.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

CHICAGO STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$579,568	\$574,477	\$5,091
Salaries and wages, finance reserve.....	29,235	29,230	5
Office expense.....	10,300	10,258	42
Office expense from contingent.....		58	
Travel.....	5,100	4,817	783
Travel from contingent.....		27	
Operation.....	749,640	749,640	
Operation from contingent.....		1,775	
Operation and repairs, deficiency.....	218,100	217,837	263
Repairs.....	159,226	158,787	439
Repairs from contingent.....		101	
Equipment.....	10,700	10,682	18
Permanent improvements.....	158,400	93,633	64,767
Contingent.....	2,000	*(1,961)	39
Sub-total.....	\$1,922,289	\$1,850,822	\$71,447
Printing.....	3,800	2,713	1,087
Total.....	\$1,926,089	\$1,853,535	\$72,534

Receipts from all sources July 1, 1919, to June 30, 1921, \$8,460.10.

* Not included in total.

ALTON STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriation.
Salaries and wages.....	\$146,580	\$146,018	\$ 542	
Office expense.....	2,600	1,416	1,184	
Travel.....	2,500	339	2,161	
Travel from contingent.....		438		
Operation.....	215,570	215,570		
Operation from contingent.....		2,491		
Operation and repairs, deficiency.....	20,000	19,696	304	
Repairs.....	45,388	45,127	261	
Repairs from contingent.....		71		
Equipment.....	17,700	17,416	284	
Permanent improvements.....	510,600	137,179		\$373,421
Contingent.....	3,000	*(3,000)		
Sub-total.....	\$963,918	\$585,761	\$4,736	\$373,421
Printing.....	1,400	1,231	169	
Total.....	\$965,318	\$586,992	\$4,905	\$373,421

Receipts from all sources July 1, 1919, to June 30, 1921, \$11,664.55.

* Not included in total.

DEPARTMENT OF PUBLIC WELFARE—Continued.

DIXON STATE HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$106,140	\$105,354	\$ 786
Salaries and wages from contingent.....		10	
Office expense.....	2,400	1,315	1,085
Office expense from contingent.....		8	
Travel.....	3,200	445	2,755
Travel from contingent.....		205	
Operation.....	141,000	141,000	
Operation from contingent.....		2,865	
Operation and repairs, deficiency.....	74,100	74,000	100
Repairs.....	24,636	24,636	
Repairs from contingent.....		912	
Equipment.....	9,940	9,919	21
Permanent improvements.....	294,500	294,493	7
Contingent.....	4,000	*(4,000)	
Sub-total.....	\$669,916	\$665,162	\$4,754
Printing.....	600	890	—290
Total.....	\$670,516	\$666,052	\$4,464

Receipts from all sources July 1, 1919, to June 30, 1921, \$14,468.90.

* Not included in total.

LINCOLN STATE SCHOOL AND COLONY.

Salaries and wages.....	\$381,552	\$381,435	\$ 117
Office expense.....	4,400	2,231	2,169
Office expense from contingent.....		26	
Travel.....	3,000	1,229	1,771
Travel from contingent.....		28	
Operation.....	519,547	519,547	
Operation from contingent.....		1,863	
Operation and repairs, deficiency.....	127,000	126,737	263
Repairs.....	84,678	84,483	195
Repairs from contingent.....		75	
Equipment.....	9,690	9,612	78
Equipment from contingent.....		7	
Permanent improvements.....	112,969	112,934	35
Contingent.....	2,000	*(1,999)	1
Sub-total.....	\$1,244,836	\$1,240,207	\$4,629
Printing.....	1,600	1,549	51
Total.....	\$1,246,436	\$1,241,756	\$4,680

Receipts from all sources July 1, 1919, to June 30, 1921, \$160,991.46.

* Not included in total.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$10,636	\$8,124	\$2,512

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

DIXON STATE COLONY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Permanent improvements.....	\$505,000	} \$513,991	\$9
Permanent improvements, finance reserve.....	9,000		
Total.....	\$514,000	\$513,991	\$9

SCHOOL FOR THE DEAF.

Salaries and wages.....	\$240,148	\$239,975	\$ 173
Office expense.....	1,200	1,200	
Travel.....	3,100	2,086	1,014
Operation.....	110,114	110,114	
Operation from contingent.....		1,909	
Operation and repairs, deficiency.....	43,000	42,836	164
Repairs.....	34,392	34,392	
Repairs from contingent.....		19	
Equipment.....	2,300	2,292	8
Contingent.....	2,000	*(1,928)	72
Sub-total.....	\$436,254	\$434,823	\$1,431
Printing.....	400	555	—155
Total.....	\$436,654	\$435,378	\$1,276

Receipts from all sources July 1, 1919, to June 30, 1921, \$10,302.16.

* Not included in total.

SCHOOL FOR THE BLIND.

Salaries and wages.....	\$131,788	\$131,543	\$ 215
Office expense.....	2,800	1,556	1,244
Travel.....	3,900	3,815	85
Operation.....	58,427	58,427	
Operation from contingent.....		992	
Operation and repairs, deficiency.....	14,200	13,940	260
Repairs.....	22,938	20,941	1,997
Equipment.....	4,100	3,782	318
Permanent improvements.....	1,000	1,000	
Contingent.....	1,000	*(992)	8
Sub-total.....	\$240,123	\$235,996	\$4,127
Printing.....	720	1,490	—770
Total.....	\$240,843	\$237,486	\$3,357

Receipts from all sources July 1, 1919, to June 30, 1921, \$8,967.35.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF PUBLIC WELFARE—Continued.

INDUSTRIAL HOME FOR THE BLIND.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$ 37,412	\$ 36,774	\$ 638
Office expense.....	1,600	1,221	379
Office expense from contingent.....	.....	5	.....
Travel.....	200	173	27
Operation.....	31,555	31,555	.....
Operation from contingent.....	.....	894	.....
Operation and repairs, deficiency.....	300	183	117
Working capital.....	129,300	128,932	268
Working capital from contingent.....	.....	7	.....
Repairs.....	10,592	9,942	650
Repairs from contingent.....	.....	92	.....
Equipment.....	5,200	4,901	299
Equipment from contingent.....	.....	2	.....
Permanent improvements.....	4,200	2,411	1,789
Contingent.....	1,000	*(1,000)	.....
Rent, etc.....	30,000	.....	30,000
Sub-total.....	\$251,259	\$217,092	\$34,167
Printing.....	200	220	—20
Total.....	\$251,459	\$217,312	\$34,147

Receipts from all sources July 1, 1919, to June 30, 1921, \$108,477.96.

* Not included in total.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$105,986	.....	\$105,986

SOLDIERS' AND SAILORS' HOME.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$265,748	\$265,715	\$ 33
Salaries and wages, finance reserve.....	13,849	13,849	.....
Office expense.....	2,500	1,435	1,065
Travel.....	500	310	190
Travel from contingent.....	.....	64	.....
Operation.....	298,878	298,816	62
Operation from contingent.....	.....	1,655	.....
Working capital.....	82,000	81,695	305
Repairs.....	54,553	54,499	54
Repairs from contingent.....	.....	281	.....
Equipment.....	6,647	6,647	.....
Permanent improvements.....	4,000	3,813	187
Contingent.....	2,000	*(2,000)	.....
Sub-total.....	\$730,675	\$728,779	\$1,896
Printing.....	500	1,562	—1,062
Total.....	\$731,175	\$730,341	\$834

Receipts from all sources July 1, 1919, to June 30, 1921, \$26,652.31.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

SOLDIERS' WIDOWS' HOME.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$36,300	\$35,881	\$ 419
Salaries and wages from contingent.....	-----	2	-----
Office expense.....	1,000	654	349
Office expense from contingent.....	-----	24	-----
Travel.....	400	320	80
Operation.....	31,864	31,864	-----
Operation from contingent.....	-----	936	-----
Operation and repairs, deficiency.....	7,000	6,679	321
Repairs.....	15,240	12,891	2,349
Repairs from contingent.....	-----	88	-----
Equipment.....	700	360	340
Contingent.....	1,000	*(1,000)	-----
Sub-total.....	\$93,504	\$89,649	\$3,855
Printing.....	200	165	35
Total.....	\$93,704	\$89,814	\$3,890

Receipts from all sources July 1, 1919, to June 30, 1921, \$307.62.

* Not included in total.

SOLDIERS' ORPHANS' HOME.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Salaries and wages.....	\$140,832	\$140,684	\$148	-----
Salaries and wages, finance reserve.....	9,477	9,477	-----	-----
Office expense.....	2,400	1,861	539	-----
Travel.....	1,400	967	433	-----
Travel from contingent.....	-----	258	-----	-----
Operation.....	171,169	171,169	-----	-----
Operation from contingent.....	-----	747	-----	-----
Operation and repairs, deficiency.....	49,600	49,066	434	-----
Repairs.....	36,634	36,634	-----	-----
Repairs from contingent.....	-----	881	-----	-----
Equipment.....	3,153	2,221	932	-----
Permanent improvements.....	112,500	42,161	-----	\$70,339
Contingent.....	2,000	*(1,881)	119	-----
Drinking water, finance reserve.....	1,000	953	47	-----
Sub-total.....	\$530,065	\$457,074	\$2,652	\$70,339
Printing.....	200	662	—462	-----
Total.....	\$530,265	\$457,736	\$2,190	\$70,339

Receipts from all sources July 1, 1919, to June 30, 1921, \$990.52.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF PUBLIC WELFARE—Continued.

CHARITABLE EYE AND EAR INFIRMARY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$110,574	\$109,976	\$ 598
Office expense.....	2,350	2,337	13
Office expense from contingent.....		45	
Travel.....	9,400	8,480	5,940
Travel from contingent.....		16	
Operation.....	71,349	71,349	
Operation from contingent.....		94	
Operation and repairs, deficiency.....	20,000	19,919	81
Operation and repairs, deficiency from contingent.....		806	
Repairs.....	8,488	8,488	
Repairs from contingent.....		39	
Equipment.....	20,600	6,473	14,127
Permanent improvements.....	360,000	360,000	
Contingent.....	1,000	*(1,000)	
Sub-total.....	\$603,759	\$583,000	\$20,759
Printing.....	250	868	—618
Total.....	\$604,009	\$583,868	\$20,141

Receipts from all sources July 1, 1919, to June 30, 1921, \$40,489.00.

* Not included in total.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$39,449	\$33,325	\$6,124

STATE TRAINING SCHOOL FOR GIRLS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Salaries and wages.....	\$149,172	\$149,084	\$ 88	
Office expense.....	3,200	3,147	53	
Office expense from contingent.....		18		
Travel.....	9,020	6,043	2,977	
Travel from contingent.....		69		
Operation.....	151,586	151,586		
Operation from contingent.....		188		
Operation and repairs, deficiency.....	56,000	55,970	30	
Operation and repairs, deficiency from contingent.....		1,607		
Repairs.....	41,400	41,400		
Repairs from contingent.....		138		
Equipment.....	11,600	8,397	3,203	
Permanent improvements.....	60,100	10,691		\$49,409
Contingent.....	2,000	*(2,000)		
Sub-total.....	\$484,078	\$428,318	\$5,351	\$49,409
Printing.....	400	1,504	—1,104	
Total.....	\$484,478	\$429,822	\$5,247	\$49,409

Receipts from all sources July 1, 1919, to June 30, 1921, \$2,075.82.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

ST. CHARLES SCHOOL FOR BOYS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$230,679	\$230,679	.....
Office expense.....	6,000	5,119	\$ 881
Travel.....	4,400	4,215	185
Travel from contingent.....	.....	81	.....
Operation.....	341,689	341,689	.....
Operation from contingent.....	.....	1,904	.....
Operation and repairs, deficiency.....	143,000	142,569	431
Repairs.....	62,132	62,132	.....
Repairs from contingent.....	.....	15	.....
Equipment.....	18,050	18,050	.....
Permanent improvements.....	65,300	48,533	16,767
Contingent.....	2,000	*(2,000)	.....
Repairs to laundry building.....	5,447	5,434	13
Barn, finance reserve.....	4,778	4,778	.....
Smoke stack, finance reserve.....	10,500	9,875	625
Farm cottage, finance reserve.....	16,273	16,273	.....
Sub-total.....	\$910,248	\$891,346	\$18,902
Printing.....	550	1,848	—1,298
Total.....	\$910,798	\$893,194	\$17,604

Receipts from all sources July 1, 1919, to June 30, 1921, \$5,112.27.

* Not included in total.

STATE PENITENTIARY.

Salaries and wages.....	\$321,680	\$321,646	\$ 34
Office expense.....	10,100	6,579	3,521
Office expense from contingent.....	.....	84	.....
Travel.....	6,650	2,968	3,582
Travel from contingent.....	.....	42	.....
Operation.....	599,356	599,356	.....
Operation from contingent.....	.....	1,485	.....
Operation and repairs, deficiency.....	131,100	123,528	7,572
Working capital.....	50,000	50,000	.....
Repairs.....	63,044	63,044	.....
Repairs from contingent.....	.....	389	.....
Equipment.....	8,845	7,375	1,470
Permanent improvements.....	13,250	6,998	6,252
Contingent.....	2,000	*(2,000)	.....
Sub-total.....	\$1,205,925	\$1,183,494	\$22,431
Printing.....	2,400	5,399	—2,999
Total.....	\$1,208,325	\$1,188,893	\$19,432

Receipts from all sources July 1, 1919, to June 30, 1921, \$661,436.27.

* Not included in total.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$649,283	\$555,887	\$93,396

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF PUBLIC WELFARE—Continued.

SOUTHERN ILLINOIS PENITENTIARY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$230,700	\$230,469	\$ 231
Office expense.....	7,400	5,691	1,709
Travel.....	6,300	1,413	4,887
Travel from contingent.....		277	
Operation.....	406,474	406,474	
Operation from contingent.....		1,041	
Operation and repairs, deficiency.....	142,600	142,161	439
Working capital.....	50,000	50,000	
Working capital from contingent.....		33	
Repairs.....	54,154	54,154	
Repairs from contingent.....		33	
Equipment.....	8,310	5,558	2,752
Permanent improvements.....	8,600	2,620	5,980
Land.....	40,000	40,000	
Land from contingent.....		616	
Contingent.....	2,000	*(2,000)	
Cistern, finance reserve.....	6,500	3,995	2,505
Limestone crusher.....	125,000		
Limestone crusher, finance reserve.....	26,500	146,530	4,970
Sub-total.....	\$1,114,538	\$1,091,065	\$23,473
Printing.....	2,200	3,955	—1,755
Total.....	\$1,116,738	\$1,095,020	\$21,718

Receipts from all sources July 1, 1919, to June 30, 1921, \$579,781.77.

* Not included in total.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$562,621	\$393,688	\$168,933

STATE REFORMATORY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$215,760	\$215,639	\$ 121
Office expense.....	7,322	7,017	305
Office expense from contingent.....		4	
Travel.....	5,800	2,293	3,507
Travel from contingent.....		25	
Operation.....	386,810	386,810	
Operation from contingent.....		1,824	
Operation and repairs, deficiency.....	107,200	107,186	14
Working capital.....	50,000	50,000	
Working capital from contingent.....		48	
Repairs.....	53,462	53,462	
Repairs from contingent.....		99	
Equipment.....	1,400	1,397	3
Permanent improvements.....	71,020	69,607	1,413
Contingent.....	2,000	*(2,000)	
Sub-total.....	\$900,774	\$895,411	\$5,363
Printing.....	1,178	6,540	—5,362
Total.....	\$901,952	\$901,951	\$1

Receipts from all sources July 1, 1919, to June 30, 1921, \$269,941.63.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$266,212	\$147,864	\$118,348

WOMAN'S PRISON.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$19,565	\$19,562	\$ 3
Office expense.....	200	200	
Office expense from contingent.....		23	
Travel.....	400	400	
Travel from contingent.....		7	
Operation.....	22,200	22,200	
Operation from contingent.....		687	
Operation and repairs, deficiency.....	7,000	6,713	287
Repairs.....	4,720	4,720	
Repairs from contingent.....		283	
Contingent.....	1,000	*(1,000)	
Sub-total.....	\$55,085	\$54,795	\$290
Printing.....	350	638	—288
Total.....	\$55,435	\$55,433	\$2

Receipts from all sources July 1, 1919, to June 30, 1921, \$975.97.

* Not included in total.

STATE FARM.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re- appropriated.
Salaries and wages from contingent.....		\$ 5		
Office expense from contingent.....		132		
Travel from contingent.....		339		
Operation from contingent.....		1,028		
Repairs from contingent.....		384		
Equipment from contingent.....		110		
Permanent improvements.....	\$180,000	95,783		\$54,217
Land.....	100,000	96,988	\$8,012	
Contingent.....	2,000	*(1,996)	4	
Sub-total.....	\$282,000	\$194,767	\$3,016	\$54,217
Printing.....	200	3	197	
Total.....	\$282,200	\$194,770	\$3,213	\$54,217

Receipts from all sources July 1, 1919, to June 30, 1921, \$1,157.49.

* Not included in total.

DEPARTMENT OF PUBLIC WELFARE—Continued.

PARDONS AND PAROLES.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$127,320	\$112,900	\$14,420
Office expense.....	9,400	6,275	3,125
Travel.....	56,400	43,375	13,025
Equipment.....	1,600	1,595	5
Sub-total.....	\$194,720	\$164,145	\$30,575
Printing.....	2,000	2,117	—117
Total.....	\$196,720	\$166,262	\$30,458

Receipts from all sources July 1, 1919, to June 30, 1921, none.

VISITATION OF CHILDREN.

Salaries and wages.....	\$33,800	\$29,369	\$4,431
Office expense.....	1,800	1,772	28
Travel.....	24,000	21,387	2,613
Repairs.....	250	250	—
Equipment.....	350	335	15
Sub-total.....	\$60,200	\$53,113	\$7,087
Printing.....	300	798	—498
Total.....	\$60,500	\$53,911	\$6,589

Receipts from all sources July 1, 1919, to June 30, 1921, none.

VISITATION ADULT BLIND.

Salaries and wages.....	\$14,000	\$11,743	\$2,257
Office expense.....	960	960	—
Travel.....	3,000	2,990	20
Operation.....	3,000	2,999	1
Repairs.....	120	120	—
Equipment.....	330	319	11
Sub-total.....	\$21,410	\$19,121	\$2,289
Printing.....	280	242	8
Total.....	\$21,690	\$19,363	\$2,297

Receipts from all sources July 1, 1919, to June 30, 1921, \$29.00.

WELFARE COMMISSIONERS.

Salaries and wages.....	\$13,700	\$10,510	\$3,190
Office expense.....	2,000	1,159	841
Travel.....	8,000	6,715	1,285
Equipment.....	400	146	254
Sub-total.....	\$24,100	\$18,530	\$5,570
Printing.....	200	574	—374
Total.....	\$24,300	\$19,104	\$5,196

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF PUBLIC WELFARE—Continued.

PSYCHOPATHIC HOSPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Repairs.....	\$ 16,000	\$ 15,959	\$ 41
Equipment.....	3,000	3,000	-----
Permanent improvements.....	100,000	99,576	424
Land.....	225,000	220,000	5,000
Sub-total.....	\$344,000	\$338,535	\$5,465
Printing.....	200	-----	200
Total.....	\$344,200	\$338,535	\$5,665

Receipts from all sources July 1, 1919, to June 30, 1921, \$166.88.

SURGICAL INSTITUTE FOR CHILDREN.

Permanent improvements.....	\$150,000	\$150,000	-----
Land.....	50,000	50,000	-----
Total.....	\$200,000	\$200,000	-----

INDUSTRIAL WORKING CAPITAL.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Lincoln State School and Colony.....	Lump sum appropriation.	\$ 8,124	-----	-----
Charitable Eye and Ear Infirmary.....		33,325	-----	-----
State Penitentiary.....		555,887	-----	-----
Southern Illinois Penitentiary.....		393,688	-----	-----
State Reformatory.....		147,864	-----	-----
Total.....	†\$1,500,000	\$1,138,888	-----	\$361,112

Receipts from Industrial Working Capital July 1, 1919, to June 30, 1921, \$1,634,188.32, as follows—

Lincoln State School and Colony.....	\$ 10,635 59
Industrial Home for Blind.....	105,986 00
Charitable Eye and Ear Infirmary.....	39,449 00
State Penitentiary.....	649,283 48
Southern Illinois Penitentiary.....	562,821 93
State Reformatory.....	266,212 32

† \$500,000.00 appropriated by Fifty-second General Assembly.

DEPARTMENT OF PUBLIC WELFARE—Concluded.

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Salaries and wages	\$6,459,870	\$6,391,823	\$ 68,047	-----
Salaries and wages from contingent		30		-----
Office expense	126,982	96,266	30,716	-----
Office expense from contingent		828		-----
Travel	222,126	144,591	77,535	-----
Travel from contingent		3,063		-----
Operation	7,352,356	7,351,995	361	-----
Operation from contingent		32,218		-----
† Operation and repairs, deficiency	2,125,000	2,111,834	13,166	-----
Operation and repairs, deficiency from contingent		4,280		-----
Working capital	279,200	278,932	268	-----
Working capital from contingent		88		-----
Repairs	1,339,927	1,330,572	9,355	-----
Repairs from contingent		5,721		-----
Equipment	179,700	154,295	25,405	-----
Equipment from contingent		446		-----
Permanent improvements	3,608,539	2,674,815	120,821	\$812,903
Land	455,000	406,988	8,012	40,000
Land from contingent		616		-----
Contingent	48,000	*(47,290)	710	-----
Miscellaneous	430,560	306,099	124,461	-----
Lump sum appropriation—Industrial working capital	1,500,000	1,138,888		361,112
Sub-total	\$24,127,260	\$22,434,388	\$478,857	\$1,214,015
Printing	60,000	59,999	1	-----
Sub-total	\$24,187,260	\$22,494,387	\$478,858	\$1,214,015
Salaries, State officers	82,000	80,750	1,250	-----
Total	\$24,269,260	\$22,575,137	\$480,108	\$1,214,015

Receipts from all sources July 1, 1919, to June 30, 1921, \$2,039,892.95.

* Not included in total.

† Appropriated by the Fifty-second General Assembly for the Charitable and Penal Institutions.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital	\$1,634,188	\$1,138,888	\$495,300

DEPARTMENT OF PUBLIC HEALTH.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$27,560	\$23,958	\$3,602
Salaries and wages from contingent.....		1,276	
Office expense.....	2,359	2,232	127
Office expense from contingent.....		176	
Travel.....	5,200	4,939	261
Operation.....	150	73	77
Operation from contingent.....		1,062	
Repairs.....	130	760	—630
Repairs from contingent.....		106	
Equipment.....	900	209	691
Equipment from contingent.....		1,578	
Contingent.....	7,200	*(4,198)	3,002
Sub-total.....	\$43,499	\$36,399	\$7,130
Printing.....	35,000	34,087	913
Total.....	\$78,499	\$70,456	\$8,043

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

COMMUNICABLE DISEASES.

Salaries and wages.....	\$78,080	\$66,795	\$11,285
Office expense.....	3,892	3,762	130
Travel.....	28,000	23,041	4,959
Operation.....	220	155	65
Repairs.....	155	240	—85
Equipment.....	635	624	11
Total.....	\$110,982	\$94,617	\$16,365

Receipts from all sources July 1, 1919, to June 30, 1921, \$211.00.

DIAGNOSTIC LABORATORY.

Salaries and wages.....	\$17,760	\$13,153	\$4,607
Office expense.....	1,089	913	176
Travel.....	1,400	382	1,018
Operation.....	7,063	9,509	—2,446
Repairs.....	534	110	424
Equipment.....	1,050	1,150	—100
Total.....	\$28,896	\$25,217	\$3,679

Receipts from all sources July 1, 1919, to June 30, 1921, none.

TUBERCULOSIS.

Salaries and wages.....	\$2,640		\$2,640
Office expense.....	725	\$ 658	67
Travel.....	4,000	1,054	2,946
Operation.....	20	5	15
Equipment.....	150	6	144
Total.....	\$7,535	\$1,723	\$5,812

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF HEALTH—Continued.

SANITATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$44,180	\$41,788	\$2,372
Office expense.....	2,800	2,237	63
Travel.....	11,000	6,402	4,598
Operation.....	1,840	2,263	423
Repairs.....	716	565	151
Equipment.....	1,600	1,981	321
Total.....	\$61,676	\$55,236	\$6,440

Receipts from all sources July 1, 1919, to June 30, 1921, none.

VITAL STATISTICS.

Salaries and wages.....	\$46,120	\$45,717	\$ 403
Office expense.....	4,120	3,949	171
Travel.....	9,700	6,727	2,973
Operation.....	15		15
Repairs.....	290	449	159
Equipment.....	1,270	1,152	118
Total.....	\$61,515	\$57,904	\$3,521

Receipts from all sources July 1, 1919, to June 30, 1921, \$157.53.

LODGING HOUSE INSPECTION.

Salaries and wages.....	\$21,000	\$19,081	\$1,919
Office expense.....	2,950	2,734	216
Travel.....	300	157	143
Operation.....	15		15
Repairs.....	10	1	9
Equipment.....	50		50
Total.....	\$24,325	\$21,973	\$2,352

Receipts from all sources July 1, 1919, to June 30, 1921, \$50.00.

BIOLOGICAL LABORATORY.

Salaries and wages.....	\$16,180	\$14,185	\$ 1,975
Office expense.....	1,200	854	346
Travel.....	1,100	238	862
Operation.....	85,221	71,861	13,360
† Operation, emergency.....	30,000	29,912	88
Repairs.....	370	317	53
Equipment.....	1,500	966	534
Total.....	\$135,551	\$118,333	\$17,218

Receipts from all sources July 1, 1919, to June 30, 1921, \$289.27.

† Appropriated by the Fifty-second General Assembly.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF HEALTH—Continued.

SURVEYS AND RURAL HYGIENE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$10,900	\$9,931	\$ 269
Office expense.....	250	44	206
Travel.....	5,500	2,724	2,776
Operation.....	860	452	408
Repairs.....	110	72	38
Equipment.....	490	342	138
Total.....	\$17,400	\$13,565	\$3,835

Receipts from all sources July 1, 1919, to June 30, 1921, none.

PUBLIC HEALTH INSTRUCTION.

Salaries and wages.....	\$9,440	\$8,773	\$667
Office expense.....	2,165	3,134	—969
Travel.....	800	672	128
Operation.....	508	183	323
Repairs.....	1,260	1,081	179
Equipment.....	1,260	1,488	—228
Total.....	\$15,431	\$15,331	\$100

Receipts from all sources July 1, 1919, to June 30, 1921, none.

✓ SOCIAL HYGIENE.

Salaries and wages.....	\$30,000	\$30,000	-----
Salaries and wages from contingent.....	-----	3,925	-----
Salaries and wages from contingent, emergency.....	-----	3,345	-----
Office expense.....	10,000	9,000	\$1,000
Travel.....	12,000	12,000	-----
Travel from contingent.....	-----	2,049	-----
Travel from contingent, emergency.....	-----	392	-----
Operation.....	19,000	19,000	-----
Operation from contingent.....	-----	9,420	-----
Operation from contingent, emergency.....	-----	963	-----
Repairs.....	3,600	1,900	1,700
Repairs from contingent.....	-----	6	-----
Equipment.....	10,000	8,000	2,000
Contingent.....	15,400	*(15,400)	-----
†Contingent, emergency.....	4,700	*(4,700)	-----
Total.....	\$104,700	\$100,000	\$4,700

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

†Appropriated by Fifty-second General Assembly.

CHILD HYGIENE AND PUBLIC HEALTH NURSING.

Salaries and wages.....	\$22,480	\$21,522	\$ 958
Salaries and wages from contingent.....	-----	1,974	-----
Office expense.....	550	542	8
Office expense from contingent.....	-----	367	-----
Travel.....	16,800	13,647	3,153
Travel from contingent.....	-----	649	-----
Operation.....	180	46	134
Repairs.....	25	-----	25
Equipment.....	285	254	11
Contingent.....	4,800	*(2,990)	1,810
Total.....	\$45,100	\$39,001	\$6,099

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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DEPARTMENT OF HEALTH—Concluded.

RABIES.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$4,000	\$2,522	\$1,478
Total.....	\$4,000	\$2,522	\$1,478

Receipts from all sources July 1, 1919, to June 30, 1921, none.

SOCIAL HYGIENE (FEDERAL)

Salaries and wages.....	Lump sum appropriation	\$56,897	-----
Office expense.....		4,023	-----
Travel.....		7,485	-----
Operation.....		24,683	-----
Repairs.....		1,020	-----
Equipment.....		5,892	-----
Total.....		\$100,000	\$100,000

Receipts from all sources July 1, 1919, to June 30, 1921, none.

** RECAPITULATION.

Salaries and wages.....	\$329,600	\$397,425	\$32,175
Salaries and wages from contingent.....		10,520	
Office expense.....	31,600	30,059	1,541
Office expense from contingent.....		543	
Travel.....	95,800	71,983	23,817
Travel from contingent.....		3,090	
Operation.....	145,090	133,459	11,631
Operation from contingent.....		11,445	
Repairs.....	7,200	5,495	1,705
Repairs from contingent.....		112	
Equipment.....	19,220	16,172	3,048
Equipment from contingent.....		1,578	
Contingent.....	32,100	*(27,288)	4,812
Sub-total.....	\$660,610	\$581,881	\$78,729
Printing.....	35,000	34,087	913
Sub-total.....	\$695,610	\$615,968	\$79,642
Salaries, State officers.....	25,200	24,000	1,200
Total.....	\$720,810	\$639,968	\$80,842

Receipts from all sources July 1, 1919, to June 30, 1921, \$707.80.

* Not included in total.

** Federal Social Hygiene not included in recapitulation.

DEPARTMENT OF TRADE AND COMMERCE.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$28,840	\$22,585	\$6,265
Office expense.....	2,400	911	1,489
Travel.....	6,000	5,859	141
Travel from contingent.....		2,233	
Operation.....	600	330	270
Repairs.....	1,500	726	774
Equipment.....	1,600	968	632
Contingent.....	20,000	*(2,233)	17,767
Sub-total.....	\$60,940	\$33,612	\$27,328
Printing.....	5,500	3,465	2,035
Printing—Geological Survey.....		2,838	—2,838
Printing—Department of Labor.....		1,101	—1,101
Total.....	\$66,440	\$41,016	\$25,424

Receipts from all sources July 1, 1919, to June 30, 1921, \$17,089.57.

* Not included in total.

INSURANCE.

Salaries and wages.....	\$131,120	\$125,357	\$5,763
Office expense.....	9,250	7,137	2,113
Travel.....	22,000	20,388	1,612
Repairs.....	1,750	1,459	291
Equipment.....	400	332	68
Equipment from contingent.....		1,194	
Contingent.....	2,000	*(1,194)	806
Sub-total.....	\$166,520	\$155,867	\$10,653
Printing.....	30,000	30,842	—842
Total.....	\$196,520	\$186,709	\$9,811

Receipts from all sources July 1, 1919, to June 30, 1921, \$7,153,242.13.

* Not included in total.

CHICAGO GRAIN INSPECTION.

Salaries and wages.....	\$473,760	\$429,558	\$44,202
Office expense.....	36,700	35,002	1,698
Travel.....	10,000	8,862	1,138
Operation.....	6,300	6,104	136
Repairs.....	2,400	2,037	363
Repairs from contingent.....		26	
Equipment.....	10,000	6,548	3,452
Contingent.....	5,000	*(26)	4,974
Sub-total.....	\$544,160	\$488,197	\$55,963
Printing.....	8,000	8,812	—812
Total.....	\$552,160	\$497,009	\$55,151

Receipts from all sources July 1, 1919, to June 30, 1921, \$501,353.11.

* Not included in total.

DEPARTMENT OF TRADE AND COMMERCE—Continued.

EAST ST. LOUIS GRAIN INSPECTION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$58,740	\$55,913	\$827
Office expense.....	3,600	3,438	162
Travel.....	1,400	829	571
Operation.....	1,600	1,593	7
Operation from contingent.....		56	
Repairs.....	1,000	826	174
Equipment.....	1,000	710	290
Contingent.....	1,000	*(56)	944
Sub-total.....	\$68,340	\$63,365	\$2,975
Printing.....	2,000	836	1,164
Total.....	\$68,340	\$64,201	\$4,139

Receipts from all sources July 1, 1919, to June 30, 1921, \$53,431.72.

* Not included in total.

FIRE PREVENTION.

Salaries and wages.....	\$122,280	\$105,503	\$16,757
Salaries and wages from contingent.....		84	
Office expense.....	9,800	9,013	787
Travel.....	47,000	35,447	11,553
Repairs.....	600	596	4
Repairs from contingent.....		1,131	
Equipment.....	1,000	573	427
Contingent.....	2,000	*(1,165)	835
Services and expenses—investigations and inspections	13,000	4,800	8,200
Sub-total.....	\$195,680	\$157,097	\$38,583
Printing.....	5,000	2,850	2,150
Total.....	\$200,680	\$159,947	\$40,713

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

ILLINOIS COMMERCE COMMISSION (FORMERLY PUBLIC UTILITIES COMMISSION.)

Salaries and wages.....	\$448,040	\$448,011	\$ 29
Salaries and wages from contingent.....		75	
Office expense.....	42,300	41,460	840
Travel.....	70,000	69,999	1
Travel from contingent.....		528	
Operation.....	800	182	618
Repairs.....	4,000	3,978	22
Repairs from contingent.....		2,926	
Equipment.....	6,000	5,925	75
Equipment from contingent.....		272	
Contingent.....	4,000	*(3,801)	199
Valuations and investigations.....	100,000	99,988	12
Sub-total.....	\$675,140	\$673,344	\$1,796
Printing.....	40,000	33,485	6,515
Total.....	\$715,140	\$706,829	\$8,311

Receipts from all sources July 1, 1919, to June 30, 1921, \$284,966.29.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF TRADE AND COMMERCE—Concluded.

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$1,260,760	\$1,186,927	\$78,833
Salaries and wages from contingent.....		109	
Office expense.....	104,050	96,961	7,089
Travel.....	156,400	141,384	15,016
Travel from contingent.....		2,761	
Operation.....	9,300	8,269	1,031
Operation from contingent.....		56	
Repairs.....	11,250	9,622	1,628
Repairs from contingent.....		4,083	
Equipment.....	20,000	15,056	4,944
Equipment from contingent.....		1,466	
Contingent.....	34,000	*(8,475)	25,525
Miscellaneous.....	113,000	104,788	8,212
Sub-total.....	\$1,708,760	\$1,571,482	\$137,278
Printing.....	90,500	84,229	6,271
Sub-total.....	\$1,799,260	\$1,655,711	\$143,549
Salaries, State officers.....	138,200	136,621	1,679
Total.....	\$1,937,460	\$1,792,232	\$145,228

Receipts from all sources July 1, 1919, to June 30, 1921, \$8,010,082.82.

* Not included in total.

DEPARTMENT OF REGISTRATION AND EDUCATION.

GENERAL OFFICE.

Salaries and wages.....	\$16,640	\$16,169	\$ 471
Travel.....	10,000	5,333	4,667
Total.....	\$26,640	\$21,502	\$5,138

Receipts from all sources July 1, 1919, to June 30, 1921, none.

REGISTRATION.

Salaries and wages.....	\$119,680	\$103,729	\$15,951
Salaries and wages from contingent.....		45	
Office expense.....	21,500	18,418	3,082
Travel.....	27,400	26,617	883
Operation.....	500	494	6
Operation from contingent.....		146	
Repairs.....	1,000	902	98
Equipment.....	2,600	1,355	1,245
Contingent.....	2,000	*(191)	1,809
Refunds.....	4,000	1,799	2,201
Sub-total.....	\$178,680	\$153,406	\$25,275
Printing.....	12,650	12,634	16
Total.....	\$191,330	\$166,039	\$25,291

Receipts from all sources July 1, 1919, to June 30, 1921, \$215,867.47.

* Not included in total.

DEPARTMENT OF REGISTRATION AND EDUCATION—Continued.

STATE MUSEUM.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$15,000	\$14,996	\$ 4
Office expense.....	3,000	2,996	4
Travel.....	1,000	996	4
Repairs.....	1,500	1,486	14
Equipment.....	6,000	5,958	32
Sub-total.....	\$26,500	\$26,442	\$58
Printing.....	5,200	5,199	1
Total.....	\$31,700	\$31,641	\$59

Receipts from all sources July 1, 1919, to June 30, 1921, none.

NATURAL HISTORY SURVEY.

Salaries and wages.....	\$53,560	\$52,377	\$1,183
Office expense.....	1,285	1,285	—
Office expense from contingent.....	—	54	—
Travel.....	8,000	7,176	824
Operation.....	3,000	2,655	345
Repairs.....	2,500	2,470	30
Repairs from contingent.....	—	914	—
Equipment.....	1,150	1,150	—
Equipment from contingent.....	—	30	—
Contingent.....	1,000	*(998)	2
Sub-total.....	\$70,495	\$68,111	\$2,384
Printing.....	6,250	6,218	32
Total.....	\$76,745	\$74,329	\$2,416

Receipts from all sources July 1, 1919, to June 30, 1921, \$176.16.

* Not included in total.

GEOLOGICAL SURVEY.

Salaries and wages.....	\$73,149	\$73,148	\$ 1
Salaries and wages from contingent.....	—	290	—
Office expense.....	3,790	3,790	—
Office expense from contingent.....	—	180	—
Travel.....	21,100	20,328	772
Operation.....	4,250	4,250	—
Operation from contingent.....	—	510	—
Repairs.....	2,200	2,200	—
Repairs from contingent.....	—	13	—
Equipment.....	1,515	1,444	71
Contingent.....	1,000	*(993)	7
Topographic survey.....	30,000	29,999	1
Sub-total.....	\$137,004	\$136,152	\$852
Printing.....	9,600	9,567	33
Total.....	\$146,604	\$145,719	\$885

Receipts from all sources July 1, 1919, to June 30, 1921, \$493.19.

* Not included in total.

DEPARTMENT OF REGISTRATION AND EDUCATION—Continued.

WATER SURVEY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$46,600	\$46,404	\$196
Office expense.....	1,600	1,599	1
Office expense from contingent.....		23	
Travel.....	5,000	4,580	420
Operation.....	3,500	3,498	2
Operation from contingent.....		866	
Repairs.....	2,500	2,495	5
Equipment.....	10,800	10,796	4
Equipment from contingent.....		72	
Contingent.....	1,000	*(961)	39
Sub-total.....	\$71,000	\$70,333	\$667
Printing.....	2,250	2,236	14
Total.....	\$73,250	\$72,569	681

Receipts from all sources July 1, 1919, to June 30, 1921, \$484.48.

* Not included in total.

IMMIGRATION COMMISSION.

Salaries and wages.....	\$12,000	\$11,298	\$702
Office expense.....	2,100	2,842	—742
Travel.....	800	567	33
Equipment.....	300	293	7
Total.....	\$15,000	\$15,000	

Receipts from all sources July 1, 1919, to June 30, 1921, none.

STATE NORMAL UNIVERSITY.

Salaries and wages.....	\$302,942	\$302,942	
†Salaries and wages, emergency.....	25,465	25,465	
Summer school salaries.....	55,790	55,790	
Salaries and wages from contingent.....		77	
Office expense.....	2,200	2,200	
Office expense from contingent.....		560	
Travel.....	4,000	1,309	2,691
Operation.....	37,860	37,860	
Operation from contingent.....		740	
Repairs.....	31,506	31,506	
Repairs from contingent.....		623	
Equipment.....	5,550	5,550	
Permanent improvements.....	3,000	1,078	1,922
Contingent.....	2,000	*(2,000)	
Sub-total.....	\$470,313	\$465,700	\$4,613
Printing.....	7,000	0,937	63
Total.....	\$477,313	\$472,637	\$4,676

Receipts from all sources July 1, 1919, to June 30, 1921, \$49,086.06.

* Not included in total.

DEPARTMENT OF REGISTRATION AND EDUCATION—Continued.

EASTERN ILLINOIS STATE TEACHERS' COLLEGE.
(Formerly Eastern Illinois State Normal School.)

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$198,610	\$198,610	-----
†Salaries and wages, emergency.....	16,327	16,327	-----
Summer school salaries.....	19,077	19,077	-----
Office expense.....	1,900	1,900	-----
Travel.....	1,200	1,085	\$115
Operation.....	23,000	23,983	37
Repairs.....	15,850	15,850	-----
Repairs from contingent.....	-----	2,000	-----
Equipment.....	4,900	4,900	-----
Permanent improvements.....	3,000	3,000	-----
Contingent.....	2,000	*(2,000)	-----
Sub-total.....	\$291,864	\$291,712	\$152
Printing.....	4,750	4,718	32
Total.....	\$296,614	\$296,430	\$184

Receipts from all sources July 1, 1919, to June 30, 1921, \$12,928.20.

* Not included in total.

WESTERN ILLINOIS STATE TEACHERS' COLLEGE.
(Formerly Western Illinois State Normal School).

Salaries and wages.....	\$177,486	\$177,379	\$107
†Salaries and wages, emergency.....	15,080	15,080	-----
Summer school salaries.....	23,554	23,554	-----
Salaries and wages from contingent.....	-----	1,390	-----
Office expense.....	3,500	3,500	-----
Travel.....	5,000	5,000	-----
Operation.....	30,400	30,366	34
Repairs.....	21,430	21,340	90
Equipment.....	6,000	5,996	4
Equipment from contingent.....	-----	322	-----
Permanent improvements, finance reserve.....	5,500	5,498	2
Contingent.....	2,000	*(1,712)	288
Sub-total.....	\$289,950	\$289,425	\$525
Printing.....	4,250	4,233	17
Total.....	\$294,200	\$293,658	\$542

Receipts from all sources July 1, 1919, to June 30, 1921, \$17,463.79.

* Not included in total.

THE DEPARTMENT OF FINANCE.

DEPARTMENT OF REGISTRATION AND EDUCATION—Continued.

NORTHERN ILLINOIS STATE TEACHERS' COLLEGE.
(Formerly Northern Illinois State Normal School).

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed. Sept. 30, 1921.
Salaries and wages.....	\$209,990	\$209,642	\$1,348
†Salaries and wages, emergency.....	17,000	17,009	-----
Summer school salaries.....	18,000	15,457	2,543
Office expense.....	1,400	1,400	-----
Office expense from contingent.....	-----	87	-----
Travel.....	500	500	-----
Operation.....	39,000	39,000	-----
Operation from contingent.....	-----	1,762	-----
Repairs.....	12,550	12,550	-----
Repairs from contingent.....	-----	150	-----
Equipment.....	5,200	5,187	13
Permanent improvements.....	5,000	4,990	10
Contingent.....	2,000	*(1,999)	1
Total.....	\$310,649	\$306,734	\$3,915
Printing.....	2,000	1,976	24
Total.....	\$312,649	\$308,710	\$3,939

Receipts from all sources July 1, 1919, to June 30, 1921, \$4,731.00.

* Not included in total.

SOUTHERN ILLINOIS STATE TEACHERS' COLLEGE.
(Formerly Southern Illinois State Normal School).

Salaries and wages.....	\$208,520	\$203,068	\$5,452
†Salaries and wages, emergency.....	17,334	17,334	-----
Summer school salaries.....	22,600	22,600	-----
Office expense.....	3,280	3,232	48
Office expense from contingent.....	-----	260	-----
Travel.....	1,200	811	389
Operation.....	26,800	26,654	146
Operation from contingent.....	-----	1,029	-----
Repairs.....	16,550	16,550	-----
Repairs from contingent.....	-----	616	-----
Equipment.....	5,080	4,987	93
Equipment from contingent.....	-----	73	-----
Contingent.....	2,000	*(1,978)	22
Total.....	\$303,364	\$297,214	\$6,150
Printing.....	4,250	4,235	15
Total.....	\$307,614	\$301,449	\$6,165

Receipts from all sources July 1, 1919, to June 30, 1921, \$19,988.30.

* Not included in total.

THE DEPARTMENT OF FINANCE.

55

DEPARTMENT OF REGISTRATION AND EDUCATION—Concluded.

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$1,664,413	\$1,638,455	\$27,958
Salaries and wages from contingent.....		1,802	
Office expense.....	45,555	43,182	2,393
Office expense from contingent.....		1,164	
Travel.....	85,000	74,202	10,798
Operation.....	174,310	173,740	570
Operation from contingent.....		5,053	
Repairs.....	107,588	107,349	237
Repairs from contingent.....		4,316	
Equipment.....	49,095	47,626	1,469
Equipment from contingent.....		497	
Permanent improvements.....	16,500	14,568	1,934
Contingent.....	15,000	*(12,832)	2,168
Miscellaneous.....	34,000	31,798	2,202
Sub-total.....	\$2,191,459	\$2,141,730	\$49,729
Printing.....	88,200	87,953	247
Sub-total.....	\$2,249,659	\$2,199,683	\$49,976
Salaries, State officers.....	25,600	20,200	5,400
Total.....	\$2,275,259	\$2,219,883	\$55,376

Receipts from all sources July 1, 1919, to June 30, 1921, \$321,218.65.

* Not included in total.

MILITARY AND NAVAL DEPARTMENT.

GENERAL OFFICE.

Salaries and wages.....	\$53,406	\$53,397	\$ 3
Office expense.....	13,650	9,757	3,893
Travel.....	20,000	13,064	6,936
Sub-total.....	\$87,056	\$76,218	\$10,832
Printing.....	13,000	11,588	1,412
Total.....	\$100,056	\$87,806	\$12,244

Receipts from all sources July 1, 1919, to June 30, 1921, none.

ILLINOIS NATIONAL GUARD.

Salaries and wages.....	\$190,000	\$190,000	
Salaries and wages, finance reserve.....	57,500	54,106	3,394
Travel.....	114,000	88,057	45,943
Operation.....	548,000	503,054	44,946
Riots, Chicago and West Frankfort, finance reserve.....	122,000	121,792	208
Inauguration, finance reserve.....	2,000	1,595	405
Total.....	\$1,033,500	\$938,604	\$94,896

Receipts from all sources July 1, 1919, to June 30, 1921, \$3,793.75.

THE DEPARTMENT OF FINANCE.

MILITARY AND NAVAL DEPARTMENT—Continued.

SOLDIERS' AND SAILORS' WAR SERVICE RECORDS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$12,000	\$10,951	\$1,049
Office expense.....	2,000	1,982	18
Travel.....	2,000	507	1,493
Equipment.....	1,000	1,000	-----
Total.....	\$17,000	\$14,440	\$2,560

Receipts from all sources July 1, 1919, to June 30, 1921, none.

BURIAL PLACES SOLDIERS AND SAILORS.

Salaries and wages.....	\$3,600	\$3,600	-----
Travel.....	4,000	1,751	\$2,249
Head stones.....	2,400	1,394	1,006
Total.....	\$10,000	\$6,745	\$3,255

Receipts from all sources July 1, 1919, to June 30, 1921, none.

ARMORIES, ARSENAL, RIFLE RANGE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Peoria Armory.....	\$150,000	\$17,042	-----	\$132,958
Kankakee Armory.....	75,000	12,498	-----	62,504
Ottawa Armory.....	12,874	10,906	\$1,968	-----
Arsenal—rifle range.....	20,000	20,000	-----	-----
Total.....	\$257,874	\$60,444	\$1,968	\$195,462

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE DEPARTMENT OF FINANCE.

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MILITARY AND NAVAL DEPARTMENT—Concluded.

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Salaries and wages.....	\$316,500	\$312,054	\$ 4,446	-----
Office expense.....	15,650	11,739	3,911	-----
Travel.....	140,000	83,379	56,621	-----
Operation.....	548,000	503,054	44,946	-----
Repairs.....	32,874	30,906	1,968	-----
Equipment.....	1,000	1,000	-----	-----
Permanent improvements.....	225,000	29,538	-----	\$195,462
Miscellaneous.....	126,400	124,781	1,619	-----
Sub-total.....	\$1,405,424	\$1,096,451	\$113,511	\$195,462
Printing.....	13,000	11,588	1,412	-----
Sub-total.....	\$1,418,424	\$1,108,039	\$114,923	\$195,462
Salaries, State officers.....	37,000	37,000	-----	-----
Total.....	\$1,455,424	\$1,145,039	\$114,923	\$195,462

Receipts from all sources July 1, 1919, to June 30, 1921, \$3,793.75.

BOARDS AND COMMISSIONS.

CIVIL SERVICE COMMISSION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$50,570	\$42,943	\$7,627
Office expense.....	9,520	8,667	853
Travel.....	3,600	3,600	-----
Travel from contingent.....	-----	1,082	-----
Repairs.....	600	565	35
Equipment.....	600	582	18
Equipment from contingent.....	-----	44	-----
Contingent.....	2,000	*(1,126)	874
Sub-total.....	\$66,890	\$57,483	\$9,407
Printing.....	10,000	9,824	176
Total.....	\$76,890	\$67,307	\$9,583

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

BOARDS AND COMMISSIONS—Continued.

FARMERS' INSTITUTE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$15,600	\$15,600	-----
Office expense.....	4,000	3,963	\$ 37
Office expense from contingent.....	200	77	-----
Contingent.....	1,000	*(77)	123
Reporting.....	14,000	13,430	-----
Per diem.....	10,000	9,121	879
Directors expense.....	15,300	13,336	1,964
County Institute.....			
Sub-total.....	\$60,100	\$56,527	\$3,573
Printing.....	32,000	31,335	665
Total.....	\$92,100	\$87,862	\$4,238

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

HISTORICAL LIBRARY.

Salaries and wages.....	\$23,340	\$23,027	\$313
Office expense.....	5,000	4,197	803
Travel.....	2,000	1,889	111
Repairs.....	400	201	199
Equipment.....	7,000	6,999	1
Historical Society.....	4,000	4,000	-----
War history.....	20,000	19,478	522
World war.....	50,000	50,000	-----
Sub-total.....	\$111,740	\$109,791	\$1,949
Printing.....	20,400	20,397	3
Total.....	\$132,140	\$130,188	\$1,952

Receipts from all sources July 1, 1919, to June 30, 1921, \$453.15.

LEGISLATIVE REFERENCE BUREAU.

Salaries and wages.....	\$53,100	\$53,036	\$ 64
Salaries and wages from contingent.....		2,000	-----
Office expense.....	2,050	2,049	1
Travel.....	4,000	1,117	2,883
Repairs.....	600	58	542
Equipment.....	2,000	1,570	430
Contingent.....	2,000	*(2,000)	-----
Sub-total.....	\$63,750	\$59,830	\$3,920
Printing.....	11,000	10,330	670
Total.....	\$74,750	\$70,160	\$4,590

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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BOARDS AND COMMISSIONS—Continued.

CONSTITUTIONAL CONVENTION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	Lump sum appropriation	\$17,300	-----
Office expense.....		1,239	-----
Travel.....		567	-----
Equipment.....		771	-----
Printing.....		6,987	-----
Total.....	\$30,000	\$26,864	\$3,136

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE PENITENTIARY COMMISSION.

Salaries and wages.....	Lump sum appropriation	\$174,907	-----
Office expense.....		3,046	-----
Travel.....		700	-----
Operation.....		56,910	-----
Repairs.....		6,064	-----
Equipment.....		36,000	-----
Permanent improvements.....		1,007,373	-----
Total.....	\$1,285,000	\$1,285,000	-----

Receipts from all sources July 1, 1919, to June 30, 1921, none.

BOARD FOR VOCATIONAL EDUCATION.

Salaries and wages.....	\$ 20,000	\$ 20,000	-----
Office expense.....	3,500	3,500	-----
Travel.....	4,800	4,800	-----
Travel from contingent.....	-----	1,000	-----
Equipment.....	1,750	1,750	-----
Contingent.....	1,000	*(1,000)	-----
Distribution.....	369,390	301,951	\$67,439
Total.....	\$400,440	\$333,001	\$67,439

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

BOARD FOR VOCATIONAL EDUCATION (FEDERAL GOVERNMENT FUND).

Salaries and wages.....	\$ 20,000	\$ 23,784	\$-3,784
Office expense.....	3,500	1,621	1,679
Travel.....	4,800	6,597	-1,797
Travel from contingent.....	-----	1,089	-----
Contingent.....	1,000	*(1,089)	-89
Fund I.....	98,558	98,558	-----
Fund II.....	184,976	184,976	-----
Fund III.....	87,605	42,550	45,055
Total.....	\$400,439	\$359,355	\$41,084

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

BOARDS AND COMMISSIONS—Continued.

BEEKEEPERS' ASSOCIATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$ 400	\$ 370	\$ 30
Office expense.....	1,200	1,200	-----
Association meeting.....	400	174	226
Total.....	\$2,000	\$1,744	\$256

Receipts from all sources July 1, 1919, to June 30, 1921, none.

DAIRYMEN'S ASSOCIATION.

Salaries and wages.....	\$ 790	\$ 790	-----
Office expense.....	1,850	1,847	\$ 3
Travel.....	280	148	112
Annual convention.....	900	894	6
One-day convention.....	1,200	883	317
Total.....	\$5,000	\$4,562	\$438

Receipts from all sources, July 1, 1919, to June 30, 1921, none.

FIREMEN'S ASSOCIATION.

Office expense.....	Lump sum appropriation	\$1,807	-----
Travel.....		193	-----
Total.....	\$2,000	\$2,000	-----

Receipts from all sources July 1, 1919, to June 30, 1921, none.

GRAND ARMY OF THE REPUBLIC.

Office expense.....	Lump sum appropriation	\$2,000	-----
Total.....	\$2,000	\$2,000	-----

Receipts from all sources July 1, 1919, to June 30, 1921, none.

GRAND ARMY HALL AND MEMORIAL ASSOCIATION.

Salaries and wages.....	\$4,000	\$4,000	-----
Office expense from contingent.....		1,700	-----
Contingent.....	1,700	*(1,700)	-----
Total.....	\$5,700	\$5,700	-----

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF FINANCE.

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BOARDS AND COMMISSIONS—Continued.

HORTICULTURAL SOCIETY.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$1,250	\$1,106	\$144
Office expense.....	4,150	4,149	1
Travel.....	1,300	1,267	33
Experiment station.....	2,000	2,000	
District and State societies.....	1,300	1,300	
Demonstration and summer meeting.....	1,000	1,000	
Total.....	\$11,000	\$10,822	\$178

Receipts from all sources July 1, 1919, to June 30, 1921, none.

POULTRY ASSOCIATION.

Salaries and wages.....	\$600	\$600	
Office expense.....	400	400	
Travel.....	200	200	
Show expense.....	800	800	
Total.....	\$2,000	\$2,000	

Receipts from all sources July 1, 1919, to June 30, 1921, none.

LIVE STOCK BREEDERS' ASSOCIATION.

Salaries and wages.....	\$ 600		\$ 600
Office expense.....	1,200		1,200
Travel.....	400		400
Live stock judging contest.....	800		800
Total.....	\$3,000		\$3,000

Receipts from all sources July 1, 1919, to June 30, 1921, none.

UNIFORM LAWS COMMISSION.

Salaries and wages.....	\$ 400	\$ 400	
Office expense.....	400	325	75
Travel.....	1,500	1,010	490
Sub-total.....	\$2,300	\$1,735	\$565
Printing.....	400	86	314
Total.....	\$2,700	\$1,821	\$879

Receipts from all sources July 1, 1919, to June 30, 1921, none.

SALARIES INVESTIGATION COMMISSION.

Salaries and wages.....	Lump sum appropriation	\$87	
Total.....	\$15,000	\$87	\$14,913

Receipts from all sources July 1, 1919, to June 30, 1921, none.

BOARDS AND COMMISSIONS—Concluded.

ZION INVESTIGATION COMMISSION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
	Lump sum appropriation		
Total.....	\$5,000	-----	\$5,000

Receipts from all sources July 1, 1919, to June 30, 1921, none.

VICKSBURG MILITARY STATUE COMMISSION.

Miscellaneous expense.....	Lump sum appropriation	\$824	-----
Total.....	\$4,340	\$824	\$3,516

Receipts from all sources July 1, 1919, to June 30, 1921, none.

**RECAPITULATION.

Salaries and wages.....	\$ 170,650	\$ 161,872	\$ 8,778
Salaries and wages from contingent.....	-----	2,000	-----
Salaries and wages from lump sum.....	-----	192,294	-----
Office expense.....	33,270	30,297	2,973
Office expense from contingent.....	-----	1,777	-----
Office expense from lump sum.....	-----	8,092	-----
Travel.....	18,060	14,031	4,029
Travel from contingent.....	-----	2,082	-----
Travel from lump sum.....	-----	1,460	-----
Operation from lump sum.....	-----	56,910	-----
Repairs.....	1,600	824	776
Repairs from lump sum.....	-----	6,064	-----
Equipment.....	11,350	10,901	449
Equipment from contingent.....	-----	44	-----
Equipment from lump sum.....	-----	36,771	-----
Permanent improvements from lump sum.....	-----	1,007,373	-----
Contingent.....	6,900	*(5,903)	997
Printing from lump sum.....	-----	6,587	-----
Miscellaneous.....	492,090	419,367	72,723
Miscellaneous expense from lump sum.....	-----	824	-----
Lump sum appropriations.....	1,343,340	*(1,316,775)	26,565
Sub-total.....	\$2,077,260	\$1,959,970	\$117,290
Printing.....	73,800	71,972	1,828
Sub-total.....	\$2,151,060	\$2,031,942	\$119,118
Salaries, State officers.....	33,000	32,016	984
Total.....	\$2,184,060	\$2,063,958	\$120,102

Receipts from all sources July 1, 1919, to June 3, 1921, \$453.15.

* Not included in total.

** Federal Board of Vocational education not included in recapitulation

CODE DEPARTMENTS, MILITARY AND NAVAL DEPARTMENT, BOARDS AND COMMISSIONS.

RECAPITULATION BY STANDARD ACCOUNTS.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Salaries and wages.....	\$12,283,743	\$11,857,264	\$ 426,479	-----
Salaries and wages from contingent.....		22,376		-----
Salaries and wages from lump sum.....		427,819		-----
Office expense.....	654,007	568,573	85,434	-----
Office expense from contingent.....		19,900		-----
Office expense from lump sum.....		28,027		-----
Travel.....	1,131,936	873,103	258,833	-----
Travel from contingent.....		14,403		-----
Travel from lump sum.....		26,188		-----
Operation.....	8,651,792	8,572,520	79,272	-----
Operation from contingent.....		61,894		-----
Operation from lump sum.....		62,335		-----
Operation and repairs, deficiency.....	2,125,000	2,111,834	13,166	-----
from contingent.....		4,280		-----
Working capital.....	279,200	278,932	268	-----
Working capital from contingent.....		88		-----
Repairs.....	1,609,817	1,581,739	20,148	\$ 7,930
Repairs from contingent.....		31,912		-----
Repairs from lump sum.....		39,210		-----
Equipment.....	349,655	307,722	41,933	-----
Equipment from contingent.....		7,180		-----
Equipment from lump sum.....		43,362		-----
Permanent improvements.....	6,293,686	3,944,962	2,348,724	2,089,891
Permanent improvements from lump sum.....		1,007,373		-----
Land.....	459,689	411,677	8,012	40,000
Land from contingent.....		1,011		-----
Contingent.....	217,200	*(162,149)	55,051	-----
Highway construction and maintenance.....	29,363,812	24,258,153	4,866,331	239,328
Waterway construction.....	20,000,000	303,914		19,696,086
Miscellaneous.....	1,561,162	1,327,425	223,737	-----
Miscellaneous from lump sum.....		7,811		-----
Lump sum appropriation.....	1,692,340	*(1,642,500)	49,840	-----
Lump sum appropriation, industrial working capital.....	1,500,000	1,138,898		361,112
Sub-total.....	\$98,173,039	\$59,351,355	\$6,387,337	\$22,434,347
Printing.....	476,800	464,112	11,688	-----
Sub-total.....	\$98,649,839	\$59,815,467	\$6,399,025	\$22,434,347
Salaries, State officers.....	710,600	688,530	22,070	-----
Total.....	\$89,359,439	\$60,503,997	\$6,421,095	\$22,434,347

Receipts from all sources July 1, 1919, to June 30, 1921. \$11,407,090.11.

	Receipts for biennium.	Bills paid.	Amount unused for biennium.
Industrial working capital.....	\$1,634,188	\$1,138,888	\$495,300

* Not included in total. † Appropriated by the Fifty-second General Assembly for the Charitable and Penal Institutions.

THE DEPARTMENT OF FINANCE.

RECAPITULATION BY STANDARD ACCOUNTS—Concluded.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Printing, binding and stationery—			
For officers, departments, institutions.....	\$816,260	\$891,604	\$—75,344
For Fifty-second General Assembly.....	165,000	43,604	121,396
Total.....	\$981,260	\$935,208	\$46,052

RECAPITULATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid	Amount lapsed Sept. 30, 1921.	Re-appropriated.
Code departments.....	\$85,079,355	\$56,675,486	\$6,164,984	\$22,238,885
Military and Naval Department.....	1,418,424	1,108,039	114,923	195,462
Boards and commissions.....	2,151,060	2,031,942	119,118	-----
Sub-total.....	\$88,648,839	\$59,815,467	\$6,399,025	\$22,434,347
Salaries, code officers.....	640,600	619,514	21,086	-----
Salaries, Military and Naval Department.....	37,000	37,000	-----	-----
Salaries, boards and commissions.....	33,000	32,016	984	-----
Total.....	\$89,359,439	\$60,503,997	\$6,421,095	\$22,434,347

ADMINISTRATIVE AUDITOR.

Under the State finance code the work performed by the Administrative Auditor and his assistants is grouped under three headings:

- (a) Approval of requisitions.
- (b) Auditing and approval of vouchers.
- (c) Handling of accounts for conveying offenders to State penal institutions, for returning fugitives and for payment of rewards for the capture of fugitives.

Requisitions, including orders for printing, are submitted every day by the charitable and penal institutions, the normal schools and the various departments under the Administrative Code, although the bulk of supplies for the State institutions are purchased on estimates submitted quarterly.

The chief of the duties of the Administrative Auditor's office is the auditing and approval of vouchers submitted by the various code departments. Every invoice and pay roll from the code departments must be audited and approved before State warrants are issued. During the past year 89,381 vouchers totalling \$33,739,334.94 were audited and approved in this office.

Included in the above total are the deficiency appropriations passed by the Fifty-second General Assembly in the amount of \$2,820,700. The major portion of this amount, or \$2,250,000, was for the Department of Public Welfare to be used in paying obligations incurred in the operation of the various charitable and penal institutions.

During the last fiscal year vouchers aggregating \$38,595.81 were approved for the conveyance of 1,816 offenders to the penal and reformatory institutions. During the previous year \$34,899.68 was expended in this work. The reason for the increase is to be found in the addition of war tax to passenger and Pullman rates. Expense accounts for the returning of 184 fugitives from justice from outside states amounting to \$11,870.82 were audited and approved by this office. Rewards offered, proclaimed and approved by the Governor for apprehending, arresting and returning fugitives from justice amounted to \$750 as against \$450 for the previous year.

BUDGET AND APPROPRIATIONS.

During the past year the second State budget was prepared and submitted to the Governor, and by him to the General Assembly. The following is a statement of the appropriation bills passed by the General Assembly:

Number.	Purpose.	Amount.
H. B. 8	Salary of Charles F. Franz.....	\$ 3,550.00
S. B. 16	Secretary of State—Deficiency.....	20,500.00
S. B. 39	Committee expenses—Fifty-second General Assembly..	28,000.00
S. B. 40	Salaries of officers and employees—Fifty-second General Assembly	115,000.00
S. B. 41	Incidental expenses, Fifty-second General Assembly...	20,000.00
S. B. 43	Appellate courts, first and second districts—Deficiency	10,499.33
H. B. 58	State Treasurer—Deficiency	80,500.00
S. B. 78	Eradication of bovine tuberculosis—Deficiency.....	40,000.00
H. B. 90	Department of Public Health—Deficiency.....	34,700.00
S. B. 91	Vocational rehabilitation	125,000.00
S. B. 99	Illinois Educational Commission.....	25,000.00
H. B. 105	Normal School salaries—Deficiency.....	91,215.00
H. B. 111	Auditor of Public Accounts—Deficiency.....	37,500.00
H. B. 114	Old Salem State Park.....	5,000.00
S. B. 147	Governor Lowden portrait.....	1,000.00
S. B. 188	Penitentiary Building Commission.....	1,149,980.00
S. B. 190	Relief of Jesse Rupert.....	5,000.00
H. B. 207	Tuscarora Drainage District.....	21,000.00
H. B. 218	For completing Centennial Building.....	914,500.00
H. B. 219	Industrial Commission—Deficiency.....	9,000.00
H. B. 241	Attorney General—Deficiency.....	44,500.00
S. B. 251	Joint Legislative Committee expenses.....	25,000.00
H. B. 260	Department of Public Welfare—Deficiency.....	2,250,000.00
H. B. 261	Department of Public Welfare—Industrial working capital—Deficiency	500,000.00
S. B. 264	Lincoln Blockhouse Memorial.....	1,000.00
H. B. 271	Executive mansion and grounds.....	10,000.00
H. B. 290	Game and fish—Deficiency.....	22,000.00
H. B. 300	State officers' salaries.....	3,544,400.00
H. B. 333	University of Illinois.....	8,925,000.00
H. B. 334	Jacksonville paving	20,768.00
S. B. 338	Attorneys for building combine investigation.....	25,000.00
S. B. 341	Hospital buildings and equipment (soldiers').....	300,000.00
H. B. 341	University of Illinois—Federal aid.....	100,000.00
H. R. 358	Salary Investigation Commission.....	25,000.00
H. R. 369	Springfield paving	\$ 33,485.40
H. B. 412	Gold Star Mothers' Statue.....	25,000.00
H. B. 418	Mining Investigation Commission.....	7,000.00
H. B. 420	Starved Rock Park.....	8,000.00

Number.	Purpose.	Amount.
H. B. 448	Governor Coles Memorial—Reappropriation.....	5,000.00
H. B. 457	Camp Merritt Memorial.....	1,000.00
S. B. 469	Relief of Robert Shannon.....	8,500.00
S. B. 497	Deep Waterway Commission.....	20,000.00
H. B. 507	Interstate Harbor Commission.....	25,000.00
S. B. 510	Illinois Building Investigation Commission.....	50,000.00
H. B. 516	State aid agricultural societies, etc.....	101,440.00
S. B. 533	Gold Star Mothers' decoration.....	5,000.00
H. B. 599	Illinois Waterway bond issue.....	20,000,000.00
H. B. 626	Constitutional Convention—Reappropriation	173,447.12
H. B. 672	State normal schools.....	2,226,324.00
H. B. 702	Flag smut eradication.....	10,000.00
H. B. 708	Educational Fair exhibits.....	75,000.00
H. B. 735	Relief of Hugh Cain.....	500.00
H. B. 740	Lockport improvements.....	3,824.00
H. B. 765	Committee expenses—Fifty-second General Assembly..	2,000.00
H. B. 766	Refund to counties on hard roads.....	3,889,382.23
H. B. 778	Court of Claims awards.....	20,179.63
H. B. 779	Court of Claims awards.....	197,469.09
H. B. 819	Relief of Isaac N. Adrian.....	3,000.00
H. B. 832	Land, Lincoln Homestead.....	15,000.00
H. B. 837	Charitable, penal and reformatory institutions.....	23,273,203.69
H. B. 842	Relief of Fay Hunsley.....	4,000.00
H. B. 846	University of Illinois—Land and buildings—Reappropriation	186,265.42
H. B. 848	Relief of Daniel Gruhlky.....	700.00
H. B. 856	Road material plants, etc.....	5,000,000.00
H. B. 857	Hard roads.....	20,000,000.00
H. B. 859	Hard roads bond issue.....	30,000,000.00
H. B. 860	Maintenance of highways.....	3,000,000.00
H. B. 861	State aid roads.....	315,781.62
H. B. 865	Omnibus bill.....	40,401,706.45
H. B. 867	Refund to counties on hard roads.....	2,869,289.87
Total		<u>\$170,486,110.85</u>
Payable from funds as follows:		
General Revenue Fund.....		\$57,957,267.00
Special Mill Tax Funds:		
University of Illinois.....		5,400,500.00
State School Fund.....		16,000,500.00
Retirement and interest—Waterway bonds.....		2,080,000.00
Payable from Receipts other than Taxes:		
Fire Prevention Fund.....		369,390.00
Illinois and Michigan Canal Fund.....		100,000.00
Road Fund.....		36,078,454.00
Working Capital Revolving Fund.....		2,000,000.00
Working capital deficiencies.....		500,000.00
Payable from Bond Issues:		
Highways.....		30,000,000.00
Waterways.....		20,000,000.00
Total		<u>\$170,486,111.00</u>

BIENNIAL APPROPRIATIONS MADE BY THE FIFTY-SECOND GENERAL ASSEMBLY AT ITS REGULAR SESSION, 1921.

EXECUTIVE OFFICERS.		
Governor	\$	176,800.00
Lieutenant Governor		35,500.00
Secretary of State.....		2,177,540.00
Auditor of Public Accounts.....		1,148,110.00
Tax Refunds:		
General Revenue Fund.....		21,500.00
State School Fund.....		500.00
University of Illinois Fund.....		500.00
Transportation of criminals.....		89,000.00
Rewards for, and transportation of fugitives.....		44,000.00
State Treasurer		502,590.00
Superintendent of Public Instruction.....		241,940.00
Attorney General		616,140.00
JUDICIAL.		
Courts		2,096,542.78

THE DEPARTMENT OF FINANCE.

67

LEGISLATIVE.

General Assembly	\$ 1,383,000.00
Legislative Reference Bureau.....	86,865.00

DEPARTMENTS.

Reserve, for the following departments.....	500,000.00
Finance	325,860.00
Agriculture	3,236,900.00
Labor	1,857,899.00
Mines and Minerals.....	319,750.00
Public Works and Buildings:	
General Revenue Fund.....	1,349,227.58
Illinois and Michigan Canal Fund.....	100,000.00
State and Federal Road Funds.....	35,074,453.72
Highway Bond Issue.....	30,000,000.00
Waterway Bond Issue.....	20,000,000.00
Welfare:	
General Revenue Fund.....	24,610,368.69
Working capital—Revolving fund.....	2,500,000.00
Public Health	1,189,869.00
Trade and Commerce:	
General Revenue Fund.....	2,651,290.00
Fire Prevention Fund.....	369,390.00
Registration and Education.....	3,133,789.00
Military and Naval.....	2,284,463.43

MISCELLANEOUS.

Civil Service Commission.....	100,410.00
Penitentiary Building Commission.....	1,149,980.00
Vocational Educational Board.....	656,608.00
Distributive State School Fund:	
General Revenue Fund.....	114,000.00
State School Fund.....	16,000,000.00
University of Illinois:	
General Revenue Fund.....	3,811,265.42
University Fund	5,400,000.00
Excess cost educating deaf, blind and delinquent children.....	430,700.00
Centennial Memorial Building.....	914,500.00
Constitutional Convention	173,447.12
State Libraries	288,880.00
Miscellaneous boards, commissions and associations.....	498,717.40
Miscellaneous Claims and Assessments:	
General Revenue Fund.....	242,524.71
1921 Road Fund.....	4,000.00
Watchmen for State House.....	52,800.00
Retirement and interest on bonds.....	3,080,000.00

\$170,486,110.85

The following tables covering the appropriations made by the Fifty-second General Assembly show the amount and percentage appropriated for the purposes enumerated:

BIENNIAL APPROPRIATIONS—ALL PURPOSES—FOR THE BIENNIUM
ENDING JUNE 30, 1923.

Purpose.	Amount appropriated.	Per cent of total.
Highway construction and maintenance.....	\$65,074,453.72	38.17%
Educational	29,039,752.42	17.04%
Charitable and penal.....	28,398,348.69	16.65%
Deep waterway construction.....	20,000,000.00	11.73%
General government	11,413,447.58	6.69%
Agriculture	3,866,840.00	1.97%
Bond retirement and interest.....	3,080,000.00	1.81%
Judicial and legal.....	2,712,682.78	1.59%
Military and naval.....	2,284,463.43	1.34%
Labor and mines.....	1,684,649.00	.99%
Legislative	1,472,565.00	.87%
Public health	1,224,859.00	.72%
Miscellaneous	739,049.23	.43%
Total	\$170,486,110.85	100.00%

BIENNIAL APPROPRIATIONS FOR OPERATION OF THE STATE GOVERNMENT (HIGHWAY AND WATER CONSTRUCTION AND MAINTENANCE EXCLUDED) FOR THE BIENNIUM ENDING JUNE 30, 1923.

Purpose.	Amount appropriated.	Per cent of total.
Educational	\$29,039,752.42	35.27%
Charitable and penal	28,393,348.69	34.49%
General government	11,413,447.58	13.86%
Agriculture	3,366,840.00	4.09%
Judicial and legal	2,712,682.78	3.29%
Military and naval	2,284,463.43	2.77%
Labor and mines	1,684,649.00	2.05%
Legislative	1,472,565.00	1.79%
Miscellaneous	739,049.23	.90%
Public health	1,224,859.00	1.49%
Total	\$82,331,657.13	100.00%

COMPARATIVE STATEMENT OF APPROPRIATIONS OF FIFTY-SECOND GENERAL ASSEMBLY AT ITS REGULAR SESSION 1921.

By appropriation accounts.	Budget estimates submitted to General Assembly.	Appropriation bills passed by General Assembly.	Amounts vetoed by Governor.	Net amount appropriated.
Payable from general revenue fund—				
Salaries and wages, employees	\$17,840,630	\$19,690,810	\$ 826,620	\$18,864,190
Salaries and wages, State officers	3,389,200	3,536,400	-----	3,536,400
Office expenses	1,194,548	1,252,882	5,100	1,247,782
Printing and stationery	1,142,300	1,172,400	-----	1,172,400
Travel	1,515,110	1,593,080	9,000	1,584,080
Operation	9,811,900	10,396,852	50,000	10,346,852
Repairs and equipment	2,960,729	2,901,573	15,380	2,886,193
Permanent improvements	6,758,058	9,220,515	2,223,736	6,996,778
Land	116,000	-----	-----	332,000
Contingencies	283,560	525,700	85,300	440,400
Deficiencies	2,225,000	3,375,370	734,956	2,640,414
Constitutional Convention	200,000	173,447	-----	173,447
Reappropriations	-----	-----	-----	*(1,425,388)
Reserve fund	500,000	500,000	-----	500,000
Tuberculosis eradication	150,000	250,000	-----	250,000
Aid to county fairs	220,000	230,000	-----	230,000
Unclassified	2,394,478	4,230,422	550,400	2,945,066
University of Illinois	-----	5,451,265	1,640,000	3,811,265
Total	\$50,701,603	\$64,097,759	\$6,140,492	\$57,957,267
Payable from special mill tax funds—				
University of Illinois	5,000,500	5,400,500	-----	5,400,500
State school fund	12,000,500	16,000,500	-----	16,000,500
Retirement and interest—waterway bonds	-----	2,080,000	-----	2,080,000
Total	\$67,702,603	\$87,578,759	\$6,140,492	\$81,438,267
Payable from receipts other than taxes—				
State Fire Marshal	235,200	369,390	-----	369,390
Illinois and Michigan Canal	100,000	100,000	-----	100,000
State and Federal Aid Highways	25,830,000	36,078,454	-----	36,078,454
Working capital, revolving fund	1,872,000	2,000,000	-----	2,000,000
Working capital, deficiencies	-----	500,000	-----	500,000
Normal schools, revolving fund	-----	760,000	-----	-----
Payable from bond issues—				
Highways	60,000,000	30,000,000	-----	30,000,000
Waterways	20,000,000	20,000,000	-----	20,000,000
Grand total	\$175,739,803	\$177,386,603	\$6,900,492	\$170,486,111

* The reappropriations of 1921 are also distributed in the other appropriation accounts as follows—

Constitutional Convention	\$ 173,447 12
Land	40,000 00
Permanent improvements	1,162,073 54
Monuments and memorials	49,867 58
Total	\$1,425,388 24

A comparative statement of the appropriations made by the Forty-ninth, Fiftieth, Fifty-first and Fifty-second General Assemblies follows:

COMPARATIVE STATEMENT APPROPRIATIONS BIENNIUMS BEGINNING JULY 1, 1915-1917-1919-1921.

By appropriation accounts.	Appropriations for biennium beginning.			
	July 1, 1915.	July 1, 1917.	July 1, 1919.	July 1, 1921.
Payable from general revenue fund—				
Salaries and wages, employees....	\$8,529,198	\$10,900,511	\$14,293,277	\$18,864,190
Salaries and wages, State officers....	3,722,032	3,091,586	3,126,200	3,536,400
Office expenses.....	761,806	899,292	967,484	1,247,782
Printing and stationery.....	470,000	841,960	981,260	1,172,400
Travel.....	768,239	970,858	1,225,236	1,584,080
Operation.....	6,339,609	7,437,657	9,026,412	10,346,852
Working capital.....	101,084	919,700	279,200	—
Repairs and equipment.....	1,514,732	1,664,080	2,180,524	2,886,193
Permanent improvements.....	3,274,025	1,836,484	5,742,656	6,996,778
Land.....	21,700	145,000	455,000	332,000
Contingencies.....	291,772	898,738	297,900	440,400
Deficiencies.....	238,683	982,206	1,736,207	2,640,414
Organization—State militia.....	—	750,000	—	—
Cyclone relief.....	—	275,000	—	—
Constitutional Convention.....	—	—	500,000	173,447
Reappropriations.....	2,026,846	*(1,550,962)	—	** (1,425,388)
Reserve fund.....	—	—	500,000	500,000
Tuberculosis eradication.....	—	—	100,000	250,000
A. d to county fairs.....	200,000	220,000	220,000	230,000
Unclassified.....	4,002,898	2,034,859	2,951,652	2,945,066
University of Illinois.....	165,000	165,000	513,000	3,811,265
Total.....	\$32,427,624	\$34,032,911	\$45,096,008	\$57,957,267
Payable from special mill tax funds—				
University of Illinois.....	5,000,000	4,800,000	5,000,500	5,400,500
State school fund.....	8,000,000	8,000,000	12,000,500	16,000,500
Retirement and interest—waterway bonds.....	—	—	—	2,080,000
Total.....	\$45,427,624	\$46,832,911	\$62,097,008	\$81,438,267
Payable from receipts other than taxes—				
State fire marshal.....	155,412	147,307	196,851	369,390
Illinois and Michigan Canal.....	25,000	60,000	100,000	100,000
State and Federal Aid Highways.....	2,000,000	3,620,063	29,195,125	36,078,454
Working capital, revolving fund.....	—	—	1,000,000	2,000,000
Working capital, deficiencies.....	—	—	—	500,000
Payable from bond issues—				
Highways.....	—	60,000,000	60,000,000	30,000,000
Waterways.....	—	—	20,000,000	20,000,000

* The reappropriations of 1917 are also distributed in the figures preceding this amount.

** The reappropriations of 1921 are also distributed in the other appropriation accounts, as follows—

Constitutional convention.....	\$ 173,447 12
Land.....	40,000 00
Permanent improvements.....	1,162,073 54
Monuments and memorials.....	49,867 58

\$1,425,388 24

The increase in the sums appropriated by the Fifty-second General Assembly compared with the appropriations of the previous General Assembly is accounted for in part by the following undertakings and activities, either new or largely extended:

Automobile investigators (salaries and traveling expenses).

Care and maintenance of Centennial Memorial Building.

Additional bank examiners (on account of legislation requiring private banks to incorporate).

Retirement and interest of highway and waterway bonds.

Increased salaries of Circuit and Superior Court Judges.
Increased rental of offices located in Chicago and other cities.
Establishment of Division of Poultry Husbandry.
State aid to the National Swine Show.
Rehabilitation of mine rescue apparatus.
Establishment of an Illinois Home for the Rehabilitation of World War Veterans.
Increased working capital, following the growth and development of industries in the penal institutions.
Increase in the number of employees in charitable and penal institutions (war-time salary schedule continued).
District health officers (salaries and traveling expenses).
Social hygiene program (Federal Government has discontinued its aid).
Establishment of a Division of Standards.
Speeding up the Topographic Survey.
Thirty per cent increase in salary rates at the State normal schools.
Investigation of the cause and cure of mental diseases.
Reorganizing and maintaining the National Guard on the increased scale following the Federal plan.
Increased vocational education in cooperation with the Federal Government.
Illinois Educational Commission (new).
Service Recognition Board (new).
Deep Waterway Commission—Lakes via St. Lawrence (new).
Illinois Building Investigation Commission (new).
Two million dollars increase per annum in the State School Distributive Fund.
Biennial increase of approximately \$3,500,000 for the University of Illinois in addition to the proceeds of the "mill tax."

Report of
THE DEPARTMENT OF AGRICULTURE
From July 1, 1920 to June 30, 1921

STATE OF ILLINOIS.
THE DEPARTMENT OF AGRICULTURE.
ORGANIZATION.

EXECUTIVE OFFICERS.

B. M. DAVISON, *Director*, Springfield.
H. H. PARKE, *Assistant Director*, Springfield.

DIVISIONS.

Division of Animal Industry and Veterinary Science.....Springfield
W. W. WRIGHT, *Superintendent*.
DR. A. T. PETERS, *Chief Veterinarian*.
Division of Dairy Extension.....Springfield
S. J. STANARD, *Acting Superintendent*.
Division of Foods and Dairies.....Kimball Building, Chicago
JAMES L. McLAUGHLIN, *Superintendent*.
Division of Game and Fish.....Springfield
RALPH F. BRADFORD, *Chief Warden*.
Division of Apiary Inspection.....Putnam
A. L. KILDOW, *Chief Inspector*.
Division of Plant Industry—
Plant Inspection—P. A. GLENN, *Chief Inspector*.....Urbana
Seed Inspection—ALBERT C. WILSON, *Chief Seed Analyst*, Springfield
Division of State Fair.....Springfield
W. W. LINDLEY, *General Manager*.
Division of Agricultural Statistics.....Springfield
S. D. FESSENDEN, *U. S. Field Agent*, in charge.

NON-EXECUTIVE OFFICERS.

BOARD OF AGRICULTURAL ADVISORS.

J. FRANK PRATHER, *Chairman*.....Williamsville
ALVIN H. SANDERS, *Care Breeder's Gazette*, 542 S. Dearborn St., Chicago
EUGENE DAVENPORT.....Urbana
EUGENE FUNK.....Bloomington
J. T. WILLIAMS.....Sterling
W. S. CORSA.....Whitehall
J. P. MASON.....Elgin
W. E. TAYLOR.....Moline
HENRY DAVIS.....Springfield
C. V. GREGORY.....223 West Jackson Boulevard, Chicago
J. R. FULKERSON.....Jerseyville
JOHN M. CREBS.....Carmi
H. J. SCONCE.....Sidell
J. G. IMBODEN.....Decatur
J. C. SAILOR.....Cissna Park

THE DEPARTMENT OF AGRICULTURE.

B. M. DAVISON, *Director.*

Viewed from an agricultural standpoint, what is the matter with business? The lack of trading and general merchandising, due to the reduced purchasing power of the farmer.

We are told that the closing of the European markets against us is the cause of the present situation. This, of course, may have had some influence upon the situation. If the closing of European markets is the only cause of the present situation, then what was the cause of the depression in 1893?

Statistics show that less than 20 per cent of our total agricultural products are exported and exports have been as low as 11 per cent. Take, for instance, wheat. The visible supply of wheat at this time is the lowest in 18 years. The supply in the elevators throughout the country is less than one-half of what it was one year ago.

Agriculture in this State is fundamental, and by all means we want to keep upon the farms of Illinois a prosperous and contented citizenship and thereby maintain the American standard of living. Why produce crops and sell them at less than cost of production? Can you imagine any manufacturing concern which year in and year out and from one year to another would continue to produce and sell at a loss? I am not suggesting that we reduce production, but I do contend that we should have a balanced production at the cost of production plus profits enough at least to educate the children and to keep them in school, and if the world will not consume our products at cost of production plus a reasonable profit, then we will have a discontented farmer and an unhappy citizenship. If the law of supply and demand is the controlling factor, then why should we not give some attention to the question of domestic needs plus the amount the rest of the world would take from us at cost of production plus, and then regulate the production to meet the combined demand.

Human nature is about the same the world over and the hope of gaining a profit from your labors will cause men (and this applies to our farmers) to engage in such enterprises as will offer a decent profit. Perhaps the matter should be regulated by our government by guaranteeing the price at least one year in advance, as was the Chinese plan. Take the furniture manufacturer, the woolen and cotton goods manufacturers. They always offer their product at cost plus, otherwise they would quit and go out of business. There are, of course, fluctuations in the price of

grain and meats and naturally when the farmer has nothing to say about the prices that he is compelled to take for his product, he rightfully complains about it. A guaranteed minimum price fixed by our Government at least one year in advance, would remove all speculations and fluctuations of markets.

Commercial failures and reduced revenue to the farmer go hand in hand and as former Secretary Meredith said, "The failures for the country are more than doubled when agriculture is depressed as against the number when the farmer is in good circumstances. Certainly this indicates a very close relationship between business and agriculture. Laboring men recognize that when business is bad and failures are common, labor is unemployed, and a reduced revenue to the farmer or the production of a crop by him at any actual loss results in stagnation of business."

The sound political thought of this country lies in the mind of the farmer. He is a slow thinker, very conservative and not easily excited or swayed. But it is important to the business interests of this country that conditions which would tend to continue unrest on the part of the farmer be avoided.

Manufacturers and business men should reduce their profits in order that the merchandise which the farmer needs and is compelled to buy will represent a fair exchange value for the product of his labor.

All kinds of labor must get back to the old basis. The Federal Reserve System and the Federal Farm Loan System are recognized as two great agencies of our government, with machinery and resources to supply the short and long time credit needs of agriculture, but same should be amended to give to the Federal Reserve Bank more discretionary powers in the extension of credit to farmers.

DIVISION OF ANIMAL INDUSTRY.

W. W. WRIGHT, *Superintendent.*

The Division of Animal Industry of the Department of Agriculture is charged with the enforcement of the State live stock sanitary laws relating to the importation of live stock; its removal from public stock yards; the control and eradication of dangerously contagious or infectious diseases among domestic animals in Illinois and the establishment and maintenance of a reputable standing among live stock sanitary authorities of the various states with reference to the value of Certificates of Health issued under the supervision of the division, and to the health of Illinois live stock, which is shipped into other states.

The records covering the six-months' period from January 1, 1921, to July 1, 1921, have been summarized and as a result we find that inspections conducted throughout the State in connection with reported outbreaks of contagious or infectious diseases number 90. This phase of the work has been conducted by the Assistant State Veterinarians assisted by the Chief Veterinarian, who made a number of calls throughout the State at the request of Assistant State Veterinarians to consult with them relative to some outbreak in their locality. In most instances the work was handled directly by the Assistant State Veterinarians.

A great many specimens that heretofore were sent to this office for diagnosis have been sent to the University of Illinois. This work has greatly assisted the practitioner to make an accurate diagnosis.

The Assistant State Veterinarians, who number about four hundred, are approved by the United States Department of Agriculture and are located in every county in the State with the exception of two in the southern part, where there are no graduate veterinarians practicing at this time.

At the market centers maintained in the State of Illinois, viz., the Union Stock Yards, Chicago; National Stock Yards, East St. Louis, and the Union Stock Yards, Peoria, the obligation of this department with reference to live stock sanitary control is great. The inspection service has been carried out and perfected.

At the Chicago yards, we have a complete system of ante-mortem inspection maintained throughout the entire yards. This system is of great advantage to the shipper, who ships live stock to this market and is unfortunate enough to have the same crippled enroute, or if he has an animal affected with some bruise or lump, he is not at the mercy of the unscrupulous speculator, who will give him little or nothing for this

animal, but it is taken care of by the State and if found to be fit for food, the carcass is then sold as all other animals sent to that market, subject to post-mortem examination.

This same system applies to the Peoria yards. It was inaugurated at the Peoria yards in January, 1919, and it has saved the shippers more money than the cost of inspection many times over.

I am sorry to state that this system of inspection is not maintained at the National Stock Yards, East St. Louis. This department has tried to induce the exchange to inaugurate the system at the yards but has not met with any cooperation from the commission men or exchange. It is sincerely hoped that this method of inspection will, in the near future, be inaugurated at these yards.

Under the law of the State of Illinois relating to the importation of cattle, provision is made for the shipment of certain classes of cattle, subject to quarantine, for their utilization for feeding purposes only. These quarantines are maintained upon the records of this office until such time as the cattle have been subjected to a tuberculin test under its supervision, or have been returned to market, in which case the quarantines become ineffective.

We have perfected in the office a system where the identity of these cattle are tested and very few of the cattle shipped out are not accounted for. We feel, therefore, that this system is a safe one for the department to maintain.

In handling this portion of the work, a record of 91,049 cattle shipped from July 1, 1920, to June 30, 1921, has been maintained, comprising 3,825 separate consignments. The following is a statement of the disposition made of these cattle up to date:

SHIPMENTS AND DISPOSITION OF FEEDER CATTLE FROM PUBLIC STOCK YARDS, AS SHOWN BY OWNERS' REPORTS TO THE DIVISION JULY 1, 1920-JUNE 30, 1921.

Yards.	Number shipped.	Slaughtered.	Tested.	Passed.	Reactors.	Suspicious.	Sold quarterly.	Died.	Castrated.	Number shipments.
Union.....	37,368	15,537	6,127	5,887	224	16	782	65	202	1,524
National.....	35,621	21,112	759	755	4	-----	545	84	116	1,671
Kansas City.....	10,497	4,609	367	365	2	-----	214	41	339	314
South Omaha.....	1,812	787	25	25	-----	-----	47	-----	31	58
South St. Paul.....	4,354	1,753	67	66	1	-----	164	10	34	179
Miscellaneous.....	866	99	534	534	-----	-----	-----	1	-----	31
Peoria.....	148	64	1	1	-----	-----	-----	-----	-----	37
Indianapolis.....	196	71	-----	-----	-----	-----	-----	-----	-----	6
Sioux City.....	88	26	-----	-----	-----	-----	-----	-----	-----	3
South St. Joe.....	99	72	-----	-----	-----	-----	-----	-----	-----	2
Total.....	91,049	44,110	7,680	7,633	231	16	1,762	201	722	3,825

The shipping of feeder hogs into the State and purchasing feeder hogs at the various stock yards was inaugurated in 1917. During the last year there have not been as many hogs removed from the Union

Stock Yards, Chicago, National Stock Yards, East St. Louis, or the Union Stock Yards, Peoria, as there have been in previous years. This might be accounted for by the low price of corn and also the great reduction in the price of hogs.

The Union Stock Yards, Chicago, has a very elaborate system by which these animals are temperatured, vaccinated, disinfected and shipped to the owners. Recently the National Stock Yards, East St. Louis, Illinois, installed an apparatus for vaccinating hogs at a great expense. The authorities went to this expense to assure the feeder better results and I feel that this system installed at the National Stock Yards should bring results.

Since 1919 this division has cooperated with the United States Department of Agriculture in examining hogs presented at the National Stock Yards for shipment into the State of Illinois, thereby trying to safeguard every shipment that leaves those yards. During the last six months the following shipments were made from the various yards:

SHIPMENTS OF SWINE FROM PUBLIC STOCK YARDS—JANUARY 1, 1921,
JUNE 30, 1921.

UNION STOCK YARDS.	
Number shipped.....	453
Died	22
Number healthy.....	431
Loss 4.8 per cent.	
NATIONAL STOCK YARDS.	
Number shipped.....	8,525
Died	553
In car.....	1
Number healthy.....	554
Loss 6.4 per cent.	7,071
KANSAS CITY STOCK YARDS.	
Number shipped.....	9,671
Died	278
Cholera	5
Swine plague.....	2
In car.....	1
Crippled in shipment.....	1
Accident	1
Number healthy.....	288
Loss 3 per cent.	9,383
KENTUCKY STOCK YARDS.	
Number shipped.....	772
Died	50
Number healthy.....	722
Loss 6.4 per cent.	
DETROIT STOCK YARDS.	
Number shipped.....	210
Died	1
Number healthy.....	209
Loss .4 per cent.	

THE DEPARTMENT OF AGRICULTURE.

INDIANAPOLIS STOCK YARDS.

Number shipped.....	118
Died	3
Number healthy.....	115
Loss 2.5 per cent.	

PEORIA STOCK YARDS.

Number shipped.....	2,577
Died	29
From heat.....	2
In transit.....	1
Vaccination	3
Thumps	1
	36
Number healthy.....	2,541
Loss 1.3 per cent.	

SOUTH ST. PAUL YARDS.

Number shipped.....	6,172
Died	115
Number healthy.....	6,057
Loss 1.8 per cent.	

TENNESSEE STOCK YARDS.

Number shipped.....	163
Died	3
Number healthy.....	160
Loss 1.8 per cent.	

TEXAS STOCK YARDS.

Number shipped.....	1,788
Died	110
Crippled	2
In transit.....	1
	113
Number healthy.....	1,675
Loss 6.3 per cent.	

On account of the numerous complaints of shipping sick or diseased hogs into this State for feeding purposes, order No. 7 was issued on January 26, 1921, to protect the feeder against the unscrupulous hog speculator. Copy of order No. 7 is as follows:

DEPARTMENT OF AGRICULTURE,
DIVISION OF ANIMAL INDUSTRY.

(Order No. 7.)

All hogs transported or driven into the State of Illinois for purposes other than immediate slaughter, which are not coming through public stock yards, shall be accompanied by a Certificate of Health issued by the State Veterinarian, or some duly authorized deputy of the state of origin.

DEPARTMENT OF AGRICULTURE,

B. M. DAVISON, *Director*.W. W. WRIGHT, *Superintendent*.A. T. PETERS, *Chief Veterinarian*.

The number of individual interstate shipments passing under the supervision of this division during the past six months is 2,699, consisting of 28,373 animals including cattle, horses and mules, hogs, sheep, goats and dogs. An itemized statement showing the number of shipments going to the several states and their distribution is attached:

SHIPMENTS OF LIVE STOCK TO VARIOUS STATES, JANUARY 1, 1921—JUNE 30, 1921.

State.	No. shipments.	Cattle.	Horses and mules.	Hogs.	Sheep.	Goats.	Dogs.	Total.
Alabama.....	90	11	2,067	—	—	—	—	2,078
Arizona.....	1	—	1	—	—	—	—	1
Arkansas.....	61	40	970	4	—	—	—	1,014
Brazil.....	1	1	—	—	—	—	—	1
California.....	10	7	—	1	—	—	2	10
Colorado.....	10	7	19	5	—	—	—	31
Connecticut.....	14	—	390	—	—	—	—	390
Cuba.....	1	17	—	—	—	—	—	17
Delaware.....	7	—	217	—	—	—	—	217
Florida.....	8	—	125	29	—	—	—	154
Georgia.....	1	—	—	1	—	—	—	1
Idaho.....	2	1	—	9	—	—	—	10
Indiana.....	266	364	336	173	—	—	—	873
Iowa.....	143	1,059	794	237	65	—	—	2,155
Kansas.....	18	11	20	4	—	—	—	35
Kentucky.....	190	100	3,192	49	27	2	—	3,370
Louisiana.....	73	96	1,349	8	1	—	—	1,454
Maine.....	2	—	3	—	—	—	—	3
Maryland.....	14	—	216	26	—	—	—	242
Massachusetts.....	2	—	19	1	—	—	—	20
Mexico.....	1	24	—	—	—	—	—	24
Michigan.....	389	190	1,679	104	—	—	—	1,973
Minnesota.....	125	80	288	82	14	—	—	464
Mississippi.....	118	14	2,647	16	—	—	—	2,677
Missouri.....	179	450	245	103	—	—	—	798
Nebraska.....	15	38	3	9	—	—	—	50
Montana.....	9	7	5	2	—	—	5	19
New Hampshire.....	11	4	170	1	—	—	—	175
New Jersey.....	2	—	25	1	—	—	—	26
New Mexico.....	1	1	—	—	—	—	—	1
New York.....	16	9	71	2	—	—	—	82
North Carolina.....	32	—	722	2	—	—	—	724
North Dakota.....	7	10	8	—	—	—	—	18
Ohio.....	11	223	64	4	24	—	—	315
Oklahoma.....	22	56	29	2	—	—	—	87
Oregon.....	1	—	—	1	—	—	—	1
Pennsylvania.....	20	42	43	5	—	—	—	90
Rock Island.....	1	—	—	1	—	—	—	1
South Carolina.....	13	—	266	—	—	—	—	266
South Dakota.....	38	10	42	13	2	—	—	67
Tennessee.....	174	34	3,523	10	—	—	—	3,567
Texas.....	23	79	87	6	—	—	—	172
Utah.....	6	8	4	2	—	—	—	16
Vermont.....	2	—	—	—	—	—	—	4
Virginia.....	22	9	345	16	—	—	—	370
Washington.....	1	—	—	1	—	—	—	1
West Virginia.....	86	6	1,955	2	—	—	—	1,963
Wisconsin.....	453	285	2,008	37	2	—	—	2,332
Wyoming.....	7	—	8	4	—	—	2	14
Total.....	2,699	3,293	23,959	973	135	2	11	28,373

During the last six months we have used the intradermal test with varying results, both in the cooperative work and in our State work. In the cooperative work, we have found that a great many "no lesions" were found on post-mortem. This has been very embarrassing to the division. However, I hope that we will be able to perfect the intradermal test, so that we will not have a recurrence. If the technique of the intradermal test can be given to every practicing veterinarian, it seems that it would be the most practical test to use. We sincerely hope that this test can be so perfected that it can be readily entrusted to all of our assistants in the very near future.

The work of the Accredited Herd System has progressed very splendidly and from the way breeders are taking hold, we will soon have as many herds on the Accredited Herd System as any in the United States. On July 1, we had the following number under supervision:

Number herds under supervision.....	1,090
Number cattle in above herds.....	22,478
Number herds accredited.....	225
Number cattle in above herds.....	5,904
Number herds passed one clean test.....	518
Number cattle in above herds.....	9,755
Number herds on waiting list.....	191
Number cattle in herds.....	4,017

The statutes of the State of Illinois make no provision for the administration of compulsory tuberculin tests and all such work is, therefore, conducted upon the request of the owner and at his expense. The disposition of reactors resulting from such tests is also optional with the owner. Such animals may be held in quarantine, subject to the restrictions, commonly known as the Bang System, and may be retained to serve their full periods of usefulness as breeding individuals, if their value warrants such action. During the six months in question 19,150 cattle have been subjected to test, of which number 920 have reacted. Reactors which have been placed in quarantine following the administration of tuberculin tests are required to be slaughtered if possible, at market centers under Federal post-mortem inspection. In view of the statements made above, reactors which have been slaughtered during the six months' period in question are not necessarily the identical animals which have reacted to tests conducted during the same period. Reactors which the owners have elected to ship to market for slaughter during this period number 3,923 (both State and Federal); 972 of these cattle showed positive lesions of being affected with tuberculosis, 131 of the number being condemned as unfit for human consumption; 246 of the number showed no lesions so far as the post-mortem inspections, as generally conducted, revealed.

The plan for cooperative hog cholera work has progressed very nicely in the State under the cooperative agreement. Four men have been assigned to this work and have given a great deal of time in assisting our own veterinarians, farm advisors and breeders in preventing diseases in swine. A great deal of good has been accomplished on account of this cooperation, for the department was able to prevent any serious outbreak of disease occurring. It has covered practically all of the large stock raising and breeding counties in the State.

Meetings addressed.....	11
Total attendance.....	1,511
Farmers interviewed.....	4,344
Veterinarians interviewed.....	1,731
Others	2,162
Making a total of.....	8,237
Farms visited on call.....	712
Farms visited voluntarily.....	190
Autopsies	399
Premises quarantined.....	384
Premises cleaned and disinfected.....	385
Miles traveled by train.....	29,552
Other conveyances.....	25,236
Making a total miles traveled.....	54,788

The sixty day retest of breeding cattle imported into the State of Illinois, which is required in this State, has done a great deal of good inasmuch as it has helped breeders to detect cattle that were affected with tuberculosis and prevented domestic cattle from infection and with the cooperation of this department and the department at Washington, these animals were returned to their respective states.

On or about March 1, 1921, the department, by order of the Director, discontinued the payment of the expenses of these tests and shifted it to the owner of the cattle. Since that time we have had a total of 345 cattle for retest under this rule, 255 have been retested at expense of owner, 90 are still unreported and still in the files.

DIVISION OF DAIRY EXTENSION.

S. J. STANARD, *Acting Superintendent.*

During the year ending July 1, 1921, the Division of Dairy Extension has continued in its work of holding dairy meetings and placing educational bulletins in the hands of the farmers.

The division has also started several new branches of work which have proven quite successful, such as fair exhibits, cow judging demonstrations at county fairs, and the placing of registered cattle where needed in Illinois.

The dairy meetings, as conducted by this division during the past year, have proven much more successful than in the past. We have held meetings in 54 towns in Illinois, with an average attendance of slightly over 350 per meeting. At these meetings the State Dairy Motion Picture was shown and discussions delivered on dairy subjects. The points emphasized most in this work were more economical production of dairy products through the use of better methods and well selected dairy sires; and the improvement of the quality of dairy products produced by bringing about a better understanding of sanitary methods. We also emphasized the importance of increasing the quantity of dairy products consumed, believing that by so doing we were rendering the people of this State a real service.

Market conditions during the past season have been such that there has been a general tendency toward decline in the amount of dairy products produced throughout the entire country, but in spite of this fact we have about held our own in Illinois. While we are still not consuming nearly as much dairy products in Illinois as we should be and are not producing nearly as much butterfat as we are consuming, we believe the outlook to be bright.

The many reports received at this office show that the quality of products produced are very much improved and that these products are being produced much more economically than in past years.

The various organizations of the dairy industry have all united in their support and close cooperation with our work and the people of the State are showing their appreciation of this work, not only by many testimonials and comments sent to this office, but by the great number of requests for work to be done throughout the State, a large per cent of which we are forced to decline due to our limited appropriation.

REGISTERED HEIFER CLUBS.

Registered heifer clubs have been placed by this division in cooperation with local people at Benton, Sesser, Ewing, Marion and West Frankfort, Illinois. These animals were all of a very good quality and were placed one or two to the farm under an agreement that they should be bred to an animal of the same breed and that the registration papers should be kept up for a period of at least three years. This will mean that the sections in which these cattle have been placed will have a large number of registered cattle of much better quality than in the past.

REGISTERED BULLS PLACED.

This division has worked on the community bull club plan to quite an extent during the past season, and while no bull associations have been placed, there have been a large number of community bull clubs formed and good registered animals placed. We feel that this plan in many localities works better than the bull association plan, although we are strictly in favor of the bull association where same can be successfully handled.

DAIRY EXTENSION EDUCATIONAL LITERATURE.

Total number of bulletins 125,000. Total number of hangers and lithographed posters distributed 35,000.

DAIRY MEETINGS HELD BY THE DIVISION OF DAIRY EXTENSION,
JUNE 30, 1920, TO JULY 1, 1921.

Town.	Date.	Town.	Date.
	1920.		1921.
Kansas, Illinois.....	Oct. 26	Ewing, Illinois.....	Mar. 8
Granville, Illinois.....	Dec. 10	West Frankfort, Illinois.....	Mar. 9
Bridgeport, Illinois.....	Dec. 20	Sesser, Illinois.....	Mar. 10
	1921.	Barry, Illinois.....	Mar. 15
Paris, Illinois.....	Jan. 4	Mason City, Illinois.....	Mar. 16
Windsor, Illinois.....	Jan. 5	Middletown, Illinois.....	Mar. 17
Odin, Illinois.....	Jan. 7	Palmyra, Illinois.....	Mar. 18
Xenia, Illinois.....	Jan. 8	Franklin, Illinois.....	Mar. 19
Mt. Vernon, Illinois.....	Jan. 11	Albion, Illinois.....	Mar. 23
Carmi, Illinois.....	Jan. 14	Wayne City, Illinois.....	Mar. 24
Norris City, Illinois.....	Jan. 15	Enfield, Illinois.....	Mar. 25
Waverly, Illinois.....	Jan. 18	Dahlgren, Illinois.....	Mar. 26
Murrayville, Illinois.....	Jan. 19	Kinderhook, Illinois.....	Mar. 31
Jacksonville, Illinois.....	Jan. 20	Petersburg, Illinois.....	Apr. 1
McLeansboro, Illinois.....	Jan. 26	Decatur, Illinois.....	Apr. 6
Eldorado, Illinois.....	Jan. 27	Winchester, Illinois.....	Apr. 9
Geneseo, Illinois.....	Feb. 1	Pittsfield, Illinois.....	Apr. 11
Golconda, Illinois.....	Feb. 4	New Holland, Illinois.....	Apr. 15
Waltonville, Illinois.....	Feb. 8	Altamont, Illinois.....	Apr. 19
Salem, Illinois.....	Feb. 10	St. Peter, Illinois.....	Apr. 20
Virginia, Illinois.....	Feb. 23	Kinmundy, Illinois.....	Apr. 21
Petersburg, Illinois.....	Feb. 24	Joppa, Illinois.....	Apr. 22
Decatur, Illinois.....	Feb. 25	Cypress, Illinois.....	Apr. 23
DuQuoin, Illinois.....	Mar. 1	Christopher, Illinois.....	Apr. 25
Marissa, Illinois.....	Mar. 2	Thompsonville, Illinois.....	Apr. 26
Carbondale, Illinois.....	Mar. 3	Tremont, Illinois.....	May 24
Jonesboro, Illinois.....	Mar. 4	Marion, Illinois.....	June 10
Benton, Illinois.....	Mar. 7		

CONCLUSION.

We feel much encouraged by the progress made during the past year and feel that it has been the most successful year in the history of this division. The demand for this work throughout Illinois has in-

creased to such an extent that it is impossible for us to take care of it all with our present appropriation, but we feel confident that with the same hearty cooperation from all dairy organizations, chambers of commerce, farm bureaus, etc., which we have received during the past, we will accomplish even greater good for the dairy cow and the consumer of dairy products during the ensuing year.

DIVISION OF FOODS AND DAIRIES.

J. L. McLAUGHLIN, *Superintendent.*

During the year covered by this report, July 1, 1920, to June 30, 1921, we have experienced the same difficulty as in the preceding year, in that it has been impossible to secure a sufficient number of chemists to carry on the work assigned to this division. The consuming public has made constant demands by sending in and requesting analyses of articles of food to determine whether or not they comply with the pure food laws, and in many instances, to determine whether or not they are fit to be used for human food.

At one time during the past year, we had only three chemists to carry on the work in the laboratory, where we were entitled to ten. But for the fact that two of the chemists had arrived at that period in their services where they receive a much larger salary than does the beginner, the laboratory would have been without chemists the greater part of the time. In this work, we have been up against a real hardship.

During the year, we have secured and put to work seven chemists in the laboratory, five of whom have left us for positions paying a much larger salary than we are permitted to pay.

It has been impossible to secure a State Analyst at the salary we are permitted to pay for this position. Mr. Brinsmaid is still acting in that capacity, and the work has taken up practically all of his time.

We had no Bacteriologist in the laboratory the first six months of the past year, consequently several important lines of food work were almost totally neglected up to January 1, 1921, when a Bacteriologist was secured.

The Division of Purchases and Supplies has submitted a much larger number of samples than heretofore and called on this division to make analyses to determine whether or not the food supplies for which the State departments are contracting, come up to specifications. This work has required all of one chemist's time, and at times, a great deal more than one can do without assistance; however, we considered this very important work and gave it all the attention possible, as the results show that it serves to protect the State and the State institutions in prohibiting the sale of food supplies that do not come up to specifications.

The Fifty-first General Assembly enacted the egg law, in an effort to prevent unscrupulous dealers from selling eggs unfit for human food to consumers in the State of Illinois, and if any loss was incurred, have it fall on the one responsible. Every effort has been made and is being

made to do this conscientiously, and to interpret the law with the least hardship on those who are willing to respect the spirit of the law and to make it as expensive as possible to the dealers who show a disposition to evade the law.

Our inspectors have called on all classes of dealers, with varying results. The principal effect is a general feeling that a fair and reasonable interpretation of the law, which this department has endeavored to give, has resulted generally in a better quality of eggs being put on the market and into cold storage. As a result of this law more good eggs went into storage in 1920, consequently a better quality has come out of storage.

Eggs shipped into the State of Illinois from other states have already shown improvement in general quality. There is a much smaller percentage of dead loss, and shippers with shady goods either eliminated the loss or diverted the shipments to points where the trade is not so particular as it is beginning to be in Illinois.

Much remains to be done however in educating the producers so to care for their eggs that they will reach the market in proper condition, and also in educating the dealers to care for the eggs properly and to realize that our attempts to enforce the law are not persecutions and should not be so considered. I am also firmly convinced that the egg law should include provisions for the sale and distribution of cold storage eggs.

Under the Illinois Commission Merchants Law, regulating consignments and sale of farm produce, we have been called upon to make many investigations with the result that the shippers of farm produce have been refunded large sums of money which they would not have been able to collect had it not been for this law.

The law requires commission merchants to retain records of all transactions made on a commission basis for a period of six months. Some of the complaints did not reach this office until after the expiration of that time. Nevertheless, all complaints received were investigated, and in every case, we were successful in securing a satisfactory settlement for the shipper. In some of these cases, the settlements amounted to several hundred dollars in favor of the shipper.

We find this to be a good law. We have had different sections interpreted by the Attorney General from time to time, yet we find there is still some little confusion and misunderstanding coming up regularly in regard to this law. For this reason, the men working as investigators, should have a fairly good business education, also should be familiar with the different kinds of farm products and the methods of handling them employed by the commission merchants.

The cold storage law has required a great deal of work the past year.

Chicago is the largest cold storage center in the world. Goods coming under the cold storage law are not permitted to remain in storage

for a period of more than twelve months. This work requires a great deal of attention. During the past year, four new warehouse companies have applied for licenses to operate cold storage warehouses for the purpose of storing commodities that come under the cold storage law. This brings the total number of such storage houses now operating under license to 56, with approximately 87,977,500 square feet of storage space.

The division has experienced more difficulties during the past year in enforcing the cold storage law, than in any year since its passage. Few laws, when first passed are perfect. Legislators, however wise, can never quite foresee the various contingencies that may arise when the law which they enact is actually put into operation. Thus, it has been with the present cold storage law. While it is undoubtedly one of the finest pieces of legislation ever enacted in this State, experience has shown that in some ways it falls short of complete success, partly because it is not far reaching enough, and again through lack of definiteness in certain parts, its enforcement is made difficult.

The principal difficulty with the present law, is the matter of getting food out of storage, that has been kept there over the twelve month limit. The law makes no provision for such removal. The warehouse man is only charged with the duty of taking proper care of all goods stored with him and making a report of goods over the time limit. He cannot dump them into the street at the end of twelve months, nor can he sell them if the charges are paid up. It therefore devolves upon the owner of the goods to secure their removal. It frequently happens that even though the owner of such goods in storage is notified, and even prosecuted and fined, he still fails to remove them for one reason or another. He is frequently a resident of another state, in which this division has no jurisdiction, and it might be added that most of the goods held in storage over the twelve-month limit at the present time, is stored and owned by non-residents.

Again, the goods may have belonged to a bankrupt, in which case they are in the hands of a receiver, and handled by the Federal Court. Thus foods may remain in storage a long time over twelve months, and the inspectors are powerless to enforce their removal; and the unfortunate part of it is, that these goods are fast deteriorating and will in a few months be unfit for food purposes.

Another part of the law that is causing trouble, is goods held temporarily or goods held less than thirty days, such as placing car-loads of eggs into a warehouse in March, and holding them in area rooms and runways, without stamping the date on the case; later moving to another storage house and stamping the case, April eggs.

Practically all of the old stock of meats held in storage by the Federal Government, has been removed, thus leaving a vast amount of storage space in the warehouses.

This condition, coupled with the general stringency of the money market, has been a severe blow to the cold storage warehouses, with the result that competition is very keen and eternal vigilance is required to keep some of them from violating the cold storage law.

A comparison of holdings given below, as reported to this office, will give a fair idea of present conditions in the warehouse business of foods that come under the cold storage law:

	Pounds.
July, 1919.....	212,489,518
July, 1921.....	97,982,821

We have had but little trouble in enforcing sanitary regulations, as most of the cold storage warehouses are modern in construction, practically all of them being of steel and concrete construction.

A financial report of the division is submitted herewith. There are also reports of the number of samples collected by the inspectors; the amount of different kinds of foods condemned as unfit for human food; the number of samples analyzed; hearings held on the legal foods; cases prosecuted and convictions obtained; licenses issued and money collected by the division.

FINANCIAL STATEMENT OF THE DIVISION OF FOODS AND DAIRIES, JULY 1, 1920—JUNE 30, 1921.

Name of appropriation.	Biennial appropriations.	Bills passed July 1, 1919, to June 30, 1920.	Bills passed July 1, 1920, to June 30, 1921.	Total bills passed July 1, 1919, to June 30, 1921.	Balance. June 30, 1921.
Salaries and wages.....	\$194,420	\$70,597	\$75,673	\$146,270	\$48,150
Office.....	26,000	9,328	11,034	20,360	5,640
Traveling.....	82,000	25,315	26,314	51,629	30,371
Operation.....	500	310	190	500	
Repairs.....	1,000	189	802	991	9
Equipment.....	2,300	319	305	624	1,676
Contingent.....	2,000	2	1,322	1,324	676
Total.....	\$308,220	\$106,058	\$115,640	\$221,698	\$86,522

DIVISION OF FOODS AND DAIRIES—SUMMARY OF YEAR'S WORK.

SANITARY INSPECTIONS.

Ice cream factories.....	8,111
Ice cream parlors.....	6,222
Confectioneries.....	5,355
Milk and cream stations.....	3,876
Bakeries.....	4,233
Restaurants.....	9,537
Meat markets.....	10,965
General stores.....	4,896
Groceries.....	29,172
Miscellaneous.....	10,302
Egg inspections.....	10,098
Stock feed.....	3,315
Commission merchant investigations.....	5,448
	<u>106,530</u>
Weighted prints of butter.....	12,854
Found short weight.....	<u>6,054</u>

DIVISION OF FOODS AND DAIRIES.

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DECOMPOSED AND FAKE FOOD DESTROYED.

Meat, pounds	32,249
Eggs	13,410
Fish	67,114
Margarine	15,000
Nuts	26,075
Dried fruit	37,804
Fresh fruit	198,780
Candy	108,563
Canned goods	1,055,590
Miscellaneous	117,108
	<u>1,671,693</u>

SAMPLES OF SUSPECTED FOODS ANALYZED.

Canned goods	81
Fruit	106
Candy	78
Vinegar	88
Catsup	78
Beverages	259
Butter and oleo.....	143
Eggs	573
Spices	78
Cream	197
Ice cream	245
Meat and fish.....	111
Milk	1,152
Stock feed	757
Miscellaneous	278
For Division of Purchases and Supplies.....	420
	<u>4,644</u>

Hearings on illegal food held.....	2,694
Cases prosecuted	1,425
Convictions obtained	1,185
Amount of fines assessed.....	<u>\$14,569</u>

LICENSES ISSUED AND FEES COLLECTED.

Fertilizers, 149 @ \$20.00.....	\$ 2,980
Cream testers, 2,017 @ \$1.00.....	2,017
Commission merchants, 453 @ \$10.00.....	4,530
Egg breaking plants, 15 @ \$300.00.....	4,500
Cold storage plants, 52 @ \$25.00.....	1,300
Brands of stock feed, 1,647 @ \$25.00.....	41,850
Egg dealers, 9,018.....	16,530
Ice cream factories, 1,101.....	4,034
	<u>\$77,741</u>
Total amount collected, including fines and license fees.....	<u>\$92,310</u>

DIVISION OF GAME AND FISH.

RALPH F. BRADFORD, *Chief Warden.*

The Civil Administrative Code, establishing the Department of Agriculture, of which the Division of Game and Fish is a part, went into effect July 1, 1917. This report covers the operations of the division from July 1, 1920, to June 30, 1921, or the fourth year of the existence of the division.

The Division of Game and Fish, headed by the Chief Warden, succeeded the State Game and Fish Commission in charge of the enforcement of the law relative to game and fish and everything pertaining thereto. The old commission was composed of three members, a president and two commissioners, as distinguished from the Division of Game and Fish which is headed by one man, the Chief Warden. The subordinate officials and employees of the State Game and Fish Commission equalled in number like officials and employees of the Division of Game and Fish. Yet the operations of the old commission were never profitable, but, on the other hand, were of great yearly expense to the State, while the Division of Game and Fish, during the four years of its existence, has, with the single exception of the year from July 1, 1918, to June 30, 1919, during which the war had its greatest effect, operated at substantial and increasing yearly profits.

The cash receipts of the division for the first year of its operation—July 1, 1917, to June 30, 1918, were \$155,915.79. Expenditures for the same period were \$150,278.92, leaving a profit of \$5,636.87.

The cash receipts for the second year, July 1, 1918, to June 30, 1919, were \$153,266.80. Expenditures for the same period were \$182,412.88, leaving a deficit of \$29,146.08.

The cash receipts for the third year, July 1, 1919, to June 30, 1920, were \$236,970.89, and the expenditures were \$187,424.09, leaving a profit of \$49,446.80.

The cash receipts for the fourth year, which this report covers—July 1, 1920, to June 30, 1921, were \$244,048.91, and the expenditures were \$203,549.79, leaving a profit of \$40,499.12.

The total cash receipts for the four years were \$790,202.39, and the total expenditures were \$723,765.68, leaving a net profit for the four-year period of \$66,436.71.

It will be noted that the receipts from year to year, with the exception of the second year, materially increased, without a corresponding increase in the expenditures, except during the last year, during which

the expenditures increased by an amount in excess of the increase of the receipts. This, however, was by reason of the expenditure of something over \$17,000 for equipment as against \$3,500 during the year previous. The heavy expenditure for equipment included monies expended for the purchase of eight Ford automobiles and eight high-powered motor boats for use by the employees of the division.

During the first year 177,121 hunting licenses were issued; the second year, 168,988; the third year 228,436 and during the last year 220,977.

The fines imposed and collected for game and fish law violations during the same four years were \$5,941.19, \$7,513.45, \$17,546.81 and \$21,307.48 respectively.

A study of the above figures indicates without question that the operations of the division have been brought to a high standard of efficiency, and it may reasonably be expected that the division will, in the future, function at a profit to the State of at least \$40,000 each year.

The question then arises what should be done with this surplus or profit from year to year. No one will contend that the State should profit by the operations of a division thereof which has to do only with the enforcement of the law relative to the conservation of the game and fish of the State, but on the contrary, all will agree that while it is good business to have such operations pay for themselves, any surplus acquired should be used for the further conservation of such game and fish and for the increase of the same for the benefit of the people.

When it became known during the last session of the legislature that the division had operated during the third year of its existence at a profit of approximately \$50,000, a resolution was promptly introduced in the Senate and thereafter concurred in by the House of Representatives as follows:

WHEREAS, The Division of Game and Fish, in the Department of Agriculture, for the year ending June 30, 1920, earned and turned into the State Treasury, the sum of \$49,486 in excess of the expenditures of the division, and for the year ending June 30, 1921, the division will pay into the State Treasury approximately \$50,000 in excess of the expenditures to maintain the division; and

WHEREAS, The receipts of the division are largely derived from the sale of hunting licenses, (more than 225,000 of our citizens paying one dollar for the privilege to hunt each year) and the sale of fishing licenses; and

WHEREAS, Only citizens who wish to participate in the privilege of hunting and fishing are taxed to maintain the activities of the division; and

WHEREAS, No money obtained by general taxation is used in paying the salaries or operating, or other expenses of the division; therefore, be it

Resolved by the Senate of the State of Illinois, the House of Representatives concurring herein. That we urge that the Fifty-third General Assembly of the State of Illinois make provisions for the appropriation of the excess earnings of the Division of Game and Fish for the purpose of purchasing suitable lands and waters to be used as fish and game preserves for the purpose of conserving and upbuilding the supply of both fish and game; the selection and purchase of lands and waters to be had under the direct selection and approval of the Governor.

Adopted by the Senate June 9, 1921.

Concurred in by the House of Representatives June 18, 1921.

Various clubs and associations throughout the State, composed of enthusiastic hunters and fishermen, upon becoming cognizant of the profitable operations of the division, have also adopted similar resolu-

tions or have importuned officials of the State to use their influence to secure the expenditure of surplus funds of the division for the betterment of hunting and fishing conditions. The above indicates the sentiment, not only of the members of the legislature, the representatives of the people of the State, but also of the people of the State associated together in hunting and fishing clubs and other like organizations. This expressed sentiment, together with a knowledge of what other states have done and are doing in the way of bettering hunting and fishing conditions, indicates that sums of money equivalent to the earnings of the division during the past two years, at least, should be expended by the State yearly for the above mentioned purposes.

Hunting conditions can be made more favorable in two ways:

First, by the establishment of game farms at State institutions where large tracts of land are possessed by the State. Pens or enclosures can be erected upon such lands, without interfering too much with the regular use thereof, for the purpose of keeping, breeding and raising game birds such as quails, prairie chickens, pheasants and partridges. At many of the institutions where such game bird farms could be established, the inmates of the institutions themselves could, to a large extent, take care of the birds. After the establishment of the game farms and the raising of quantities of game birds, these should be taken to and liberated in parts of the State where they will thrive and multiply.

Secondly, the number of waterfowls in the State, the hunting of which is without doubt of more interest to the majority of those who take out hunting licenses than the hunting of other game, should be increased by the establishment of rest grounds or refuges at various points throughout the State frequented by such birds. Tracts of swamp or submerged lands should be purchased for use as such rest grounds and refuges and in addition, various of the natural lakes or low lands owned or controlled by the State, should be set aside under the provisions of the Game and Fish Code as rest grounds or refuges for waterfowls.

Much is being done at the present time and has been done during the past four years, relative to the stocking of the streams and lakes of the State with young fish, the supply being obtained from the hatchery at Spring Grove and from fish rescued from the Mississippi and other rivers. Increased facilities at the Spring Grove hatchery would be of great benefit. The employment of more men for special work during the fall of each year in the rescuing of fish from the Mississippi and other rivers for distribution throughout the State is recommended, but most important of all is the question not only of conserving the present supply of fish in the Illinois River, which is or has been the greatest and best habitat of fish in the United States, but of creating conditions which will increase the supply. It is well known that the pollution of the Illinois River by sewage from the city of Chicago and other cities along its course has, to a great extent, ruined the old spawning grounds. More-

over, a great many of the large tracts of submerged or swamp lands adjacent to the river, in the past the natural breeding and spawning beds of the river fish, have been reclaimed for farming purposes and drained of all standing waters and large levees and dikes constructed. Substitutes for these natural spawning beds, if the supply of fish in the Illinois River is to be maintained at what it has been in the past, should be provided. This can be done by the purchase by the State of submerged lands and lakes, with the funds of the division earned in excess of its operations from year to year, and they should be so purchased before the supply is wholly exhausted.

All of the meandered waters of the State should be made fish preserves, under the provisions of the Game and Fish Code, and in some instances these waters should also be made resting grounds or refuges for waterfowls. Mud and Clear Lakes, which connect with the Illinois River proper some eight or ten miles north of Havana, should, we urge, not only be made fish preserves, but also rest grounds or refuges for waterfowls and shore birds. These lakes were both meandered by the Federal Government in the year 1837 or thereabouts, and, having been so meandered, constitute within the meander lines public or State waters. These lakes were made fish preserves some years ago. This action ostensibly prohibited the taking of fish from them, except by means of hooks and lines, but because of the inaccessible location of the lakes and certain doubt as to the exact location of the meander lines, for the reason that practically all the adjacent land has become flooded and overflowed, the enforcement of the provisions of the law respecting fish preserves has been almost impossible.

These lakes should be surveyed, the original meander lines definitely determined, maps and plats made, and the waters within such meander lines should again, by proper action, be designated not only as fish preserves, but as rest grounds or refuges for waterfowls and shore birds. The waters should then be adequately posted, and in order to enforce the provisions of the law respecting fish preserves and rest grounds or refuges, an employee of the division should be permanently located at the nearest accessible point to these lakes where a suitable house can be constructed for his permanent living place.

We understand, of course, that the profits of the division cannot be set aside for expenditure by the division, but that they go into the general fund and that in order to expend the same, they will have to be regularly appropriated for specific purposes by the legislature.

In addition to the recommendations herein above set forth as to the expenditure of the surplus funds of the division, we also recommend that additional automobiles and motorboats be purchased by the State for the use of wardens in the enforcement of the law. Violators of both the game and fish provisions of the Code are today, of course, invariably provided with automobiles and power boats and the wardens cannot

successfully cope with them and enforce the laws without being similarly equipped. Many of the wardens own automobiles themselves, which they operate without any compensation, except reimbursement for the amount of gasoline and oil used. This is a hardship upon employees working at small salaries and the State should furnish these men automobiles to be operated at the expense of the State. The same is true, to an extent, as to motorboats.

In the early part of this year the steamship "Illinois" which several years ago was used by the State Game and Fish Commission, was returned to the Division of Game and Fish after having been used in the naval service at Alton. It is expected that this ship can be used successfully in the Illinois and Mississippi Rivers in the future to enforce provisions of that part of the Code relative to fishing.

During the year which this report covers, the improvements planned at the Spring Grove hatchery have been, to a large extent, completed so that the hatchery at the present time is a real one, something like 500,000 black bass having been raised last spring which, when two or three months old, were distributed in the various streams of the State. In addition, several million whitefish and lake trout were artificially hatched and turned into the waters of Lake Michigan.

At the last session of the Legislature the sum of \$15,000 was appropriated for the purchase of lands. This appropriation was for the purpose of purchasing the tract of approximately twenty-three acres now leased by the State in connection with the hatchery at Spring Grove from the Wieland Dairy Company. This tract of land is almost wholly covered by a natural pond, the use of which is a necessary adjunct to the artificial bass ponds constructed by the State. The lease now in force between the State and the owners of this property contains an option permitting the State to purchase the land at any time prior to July 1, 1923, for the sum of \$15,000 and we recommend and urge that this purchase be consummated before that time.

Section 58 of the Game and Fish Code provides for the issuance of permits for the shipment of game. During the year covered by this report 501 of such permits were issued. There is nothing in the law requiring parties receiving such permits to make a report of the number of birds killed or shipped, but for the purpose of obtaining this information a letter was sent to each one of the parties who obtained such permits, with the request that they send in a report as to the number of all kinds of game birds killed. Of the 501 parties to whom permits were issued, 428 responded to the request for reports, or about 85 per cent. They reported that they had killed in the aggregate 28,285 game birds during the 1920 open season.

Section 52 of the Code requires each holder of a mussel or clamming license to make a report of the total weight of mussels taken during each season. This law is difficult of enforcement, but of the 1,526 parties to

whom clammer's or mussel licenses were sold, reports were received from 1,184 or approximately 75 per cent. These reports show that during the 1920 season there were 8,489,240 pounds or 4.245 tons taken during the 1920 season; that the amount received for shells, by the holder of such licenses was \$259,399.10 or an average of approximately sixty-five dollars a ton.

The above figures show what an enormous industry the taking of clams or mussels is. Probably the greatest clamming beds in the State are located in that part of the Mississippi River which forms the boundary line between Illinois and Iowa, and reports having been received that some of such beds are becoming exhausted or partially exhausted, the officials of the division have agreed with the officials of the state of Iowa to set aside jointly for a period of five years, as the law permits, certain of these clamming or mussel beds wherein it will be unlawful to take the clams or mussels during that period. The necessary action to bring about that result will be taken prior to the opening of the clamming season next year.

The present law known as the Game and Fish Code of Illinois, which contains all laws relative to the conservation of game and fish, went into effect July 1, 1919. Work by the division and its officers and employees under the law developed that in several particulars it was faulty or needed tightening up. For that purpose a bill was introduced at the last session of the legislature, changing the laws in several respects. Some new features were also added, notably restrictions as to the number and size of black bass which might be taken each day. This amendatory bill unfortunately failed of passage in the last hours of the session of the legislature. We recommend and urge that at the next session of the legislature a similar amendatory bill be introduced and its passage secured.

Attached hereto is an itemized statement of the cash receipts and expenditures of the division for the year covered by this report, and also a statement of the institutions to which confiscated fish and the number of pounds thereof were donated during that period. This statement indicates that approximately the usual number of pounds of confiscated fish were distributed.

STATEMENT OF CASH RECEIPTS AND EXPENDITURES FOR THE YEAR
ENDING JUNE 30, 1921.

CASH RECEIPTS.	
Sale of hunting and trapping licenses.....	\$181,317.50
Sale of fishing licenses.....	31,764.00
Fines for fish violations.....	8,077.05
Fines for game violations.....	13,230.43
Sale of wholesale licenses.....	6,675.00
Sale of permits.....	1,910.00
Miscellaneous receipts	1,074.93
Total	\$244,048.91

EXPENDITURES.

Salaries and wages.....	\$118,488.84
Office expense	5,221.13
Travel	28,582.66
Operation	21,595.72
Repairs	6,370.46
Equipment	17,263.74
Permanent improvements	6,027.24
Total	\$203,549.79
Excess receipts over disbursements.....	\$40,499.12

CREDITS.

Confiscated fish sent to State and charitable institutions, 66,894 pounds at 10 cents per pound.....	6,689.40
Total profit	\$47,188.52

CONFISCATED FISH DONATED TO STATE INSTITUTIONS JULY 1, 1920, TO
JUNE 30, 1921.

	Pounds.
State School for Boys, St. Charles.....	3,953
State School for Girls, Geneva.....	4,703
State Hospital, Kankakee.....	13,047
State Hospital, Elgin.....	13,442
State Hospital, Jacksonville.....	555
State Hospital, Watertown.....	8,016
State Reformatory, Pontiac.....	7,167
State Eye and Ear Infirmary, Chicago.....	1,125
Soldiers' Widows' Home, Wilmington.....	275
State Hospital, Bartonville.....	560
State Penitentiary, Joliet.....	4,016
Soldiers' and Sailors' Home, Quincy.....	4,746
Soldiers' Orphans' Home, Normal.....	150
State Hospital, Alton.....	400
State Hospital, Anna.....	110
Total	62,265

CONFISCATED FISH DONATED TO CHARITABLE INSTITUTIONS.

	Pounds.
Working Boys' Home, Chicago.....	996
Provident Hospital, Chicago.....	428
Dixon Hospital, Dixon.....	19
Little Sisters of the Poor, Chicago.....	596
Columbus Extension Hospital, Chicago.....	141
Cottage Hospital, Galesburg.....	118
Free Kindergarten, Galesburg.....	80
St. Mary's Hospital, Galesburg.....	110
Orphans' Home, Andover.....	174
House of the Good Shepherd, Chicago.....	225
Monmouth Hospital, Monmouth.....	95
Warren County Home, Monmouth.....	70
State Hospital, East Moline.....	402
DuQuoin Children's Home, DuQuoin.....	200
Mercer County Home, Aledo.....	99
Clark County Home, Marshall.....	100
Salvation Army, Mt. Vernon.....	100
Moline Lutheran Home, Moline.....	75
Macon County Farm, Decatur.....	343
St. Anthony's Hospital, Rock Island.....	78
Orphans' Home, Creal Springs.....	57
Bethany Home, Rock Island.....	125
Total	4,629

DIVISION OF APIARY INSPECTION.

A. L. KILDOW, *Chief Inspector.*

The handling of disease has been very satisfactory, considering the difficulty in procuring inspectors under the low wage. Quite a number of calls came from new territory during the year ending June 30, 1921, and were promptly taken care of, while the work in the old territory progressed very satisfactorily.

There was a marked increase in the number of field meets during the year, and the interest shown at these meets was very gratifying. Many new associations were formed, among them being those at Carbon-dale, Cambridge, Edwardsville and Chicago. Great interest has been manifested at these meetings, for the bee-keepers are awakening to their interests, and are cooperating with the inspector in the eradication of Foul Brood and the advancement of the bee industry.

The year has been anything but satisfactory so far as weather conditions are concerned. The drouth during the first half of the season was bad, killing the white clover and causing a very light flow from fall flowers. Taking the State as a whole, about one-quarter crop was secured. A great many colonies went into winter quarters with insufficient stores, but owing to the mild winter, came through in very good condition.

Spring was long drawn out with an unusual amount of bad weather for bees. Feeding was necessary in order to keep the bees from starving. There being no white clover the only source for a honey flow was from sweet clover. This furnished a very good crop in the sweet clover localities. Outside of that bees gathered barely enough for a living and to stimulate the brood rearing, which put them in good condition for the fall flow.

REPORT OF APIARY INSPECTIONS, JULY 1, 1920, TO JUNE 30, 1921.

Date.	Number colonies.	Number apiaries visited.	Number apiaries diseased.	Number days.	Expense.	Office expense.	Per diem
July.....	2,240	81	25 { 15 E. F. B. 10 A. F. B.	44½	\$ 93 15	-----	\$178 00
August.....	1,188	76	23 { 15 A. F. B. 8 E. F. B.	44	79 53	\$1 85	176 00
September.....	1,431	68	20 { 14 A. F. B. 6 E. F. B.	41½	52 33	1 25	166 00
October.....	199	9	5 A. F. B.	17	59 92	4 00	68 00
November.....	†	†	†	2	-----	-----	8 00
December.....	†	†	†	6	29 02	2 00	24 00
January.....	†	†	†	3	12 28	-----	12 00
February.....	151	-----	2 A. F. B.	5	15 24	2 95	20 00
March.....	414	7	1 E. F. B.	16	53 43	-----	64 00
April.....	556	31	6 { 3 A. F. B. 3 E. F. B.	29	72 05	1 25	116 00
May.....	1,951	120	25 { 21 A. F. B. 4 E. F. B.	59	135 58	2 00	236 00
June.....	2,395	140	44 { 7 E. F. B. 37 A. F. B.	57½	153 40	3 00	230 00
Total.....	10,524	532	172	324½	\$755 91	\$18 30	\$1,298 00

* Report and instruction work.

† Chicago and Springfield Conventions.

‡ Inspection for sale of bees.

DIVISION OF PLANT INDUSTRY.

P. A. GLENN, *Chief Inspector.*

During the year July 1, 1920, to June 30, 1921, 254 nurseries were inspected, and 18 of the more important ones received a second inspection.

The nurseries vary in size from less than one acre to 250 acres. The total acreage devoted to the growing of nursery stock is 2,691 acres.

The following is a classified list of the nurseries inspected during the year with respect to size, as compared with those inspected the previous year:

Acreage.	1919-1920	1920-1921
200 acres or more.....	.....	2
100 acres or more.....	10	6
100 acres or more, but less than 200.....	.....	7
50 acres or more, but less than 100.....	2	9
25 acres or more, but less than 50.....	7	17
10 acres or more, but less than 25.....	22	31
5 acres or more, but less than 10.....	24	39
2 acres or more, but less than 5.....	39	38
1 acre or more, but less than 2.....	38	105
Less than 1 acre.....	79	.....
Total.....	221	254

There is an increase in the number of nurseries and the acreage devoted to the growing of nursery stock. Interest in the industry is increasing, due largely to Federal quarantine No. 37, which has shut off the supply of foreign stock for commercial purposes. To supply the increased demand made upon them, the nurserymen must grow, not only more stock of the kinds which they have been growing, but must grow kinds of stock which heretofore were supplied by foreign nurseries.

The San Jose scale and the oyster-shell scale are the most serious pests found in the nurseries. By repeated, thorough inspections of the infested nurseries and persistent effort on the part of the nurserymen, conditions with respect to these pests are rapidly improving.

Outside of the nurseries, in commercial orchards, the San Jose scale is being satisfactorily controlled, but in farm orchards and in ornamental plantings little effort is being made to control it.

The oyster-shell scale is troublesome only in the north half of the State. It is likewise kept under control in well cared for orchards, but in lawns and parks in many of the cities and towns, it is practically ex-

terminating some of the valuable trees and shrubs, such as ash, poplar, willow, lilac, dogwood and *rosa rugosa*. Efforts are being made to get municipal authorities to adopt measures for the control of this pest.

The following is a list of the principal pests found in the nurseries and the number of times each was made the subject of precautionary measures:

San Jose scale.....	56	Pear blight.....	1
Oyster-shell scale.....	51	Common barberry.....	4
Anthracnose.....	60	Forbes' scale, et al.....	1
Scurfy scale.....	41	Leaf-crumpler.....	2
Poplar and willow borers.....	36	Bronze birch-borer.....	3
Strawberry leaf-spot.....	33	Strawberry root aphid.....	1
Woolly aphid of the apple.....	24	Strawberry leaf-roller.....	1
Miscellaneous borers.....	18		
Crown-gall.....	8		
Peach-tree borer.....	5		
			345

The following certificates were issued:

233 Nurseryman's certificates.	1,580 Agent's permits.
79 Dealer's certificates.	3 Greenhouse certificates.
45 Outside-nursery permits.	

IMPORTATION OF STOCK FROM FOREIGN COUNTRIES.

Since Federal quarantine No. 37 went into effect, the only nursery stock which can be imported into the United States (except under special permits) are fruit stocks, rose stocks, bulbs and seeds. The number of shipments requiring inspection, therefore, has greatly diminished and the danger of introducing foreign pests has greatly diminished. During the year the following shipments from foreign countries have come in:

Kinds of stock.	Number of shipments.	Number cases.	Number plants.
Rose stocks.....	20	44	412,000
Fruit stocks.....	11	13	71,000
Bulbs.....	61	921	1,000,000
Seeds of trees and shrubs.....	26		

Nearly all the rose stocks come from England, the fruit stocks from France, bulbs from Holland and Japan, and seeds from Australia, France, Japan, Germany, Austria and Italy.

Larvae of the coiled rose-slug (*emphytus cinctus*) were found in a large number of the shipments of rose stocks from England. Five nests of the brown-tail moth, containing about 500 larvae were intercepted in shipments of fruit stocks from France.

The 61 shipments of bulbs were all that were reported by the importers, but since arrangements have been made by which Federal inspectors inspect bulbs at the seaboard port, importers are not required to report shipments of bulbs to this office and many do not; hence, the 61 shipments do not represent the total number.

The quantity of seed of trees and ornamental shrubs has increased since foreign shipments for commercial purposes has been discontinued.

ERADICATION OF THE COMMON BARBERRY.

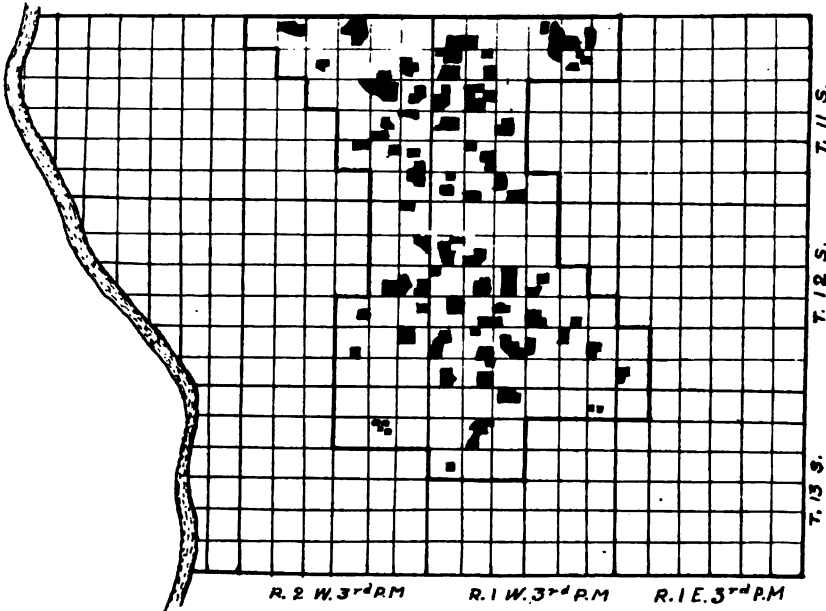
During the year through the activities of inspectors of the Federal Bureau of Plant Industry, cooperating with the Department of Agriculture, common barberry bushes were discovered on 602 properties and the barberries were removed from 411 properties. The total number of bushes found was 13,349 and the number reported removed, 3,642.

During the entire campaign a total of 100,740 bushes have been found on 7,169 premises and a total of 85,411 bushes have been removed from 6,485 premises.

RED CEDAR ERADICATION.

The work of eradicating the red cedars from the fruit-growing section of Union County has been continued as time permitted. In addition to the 376 premises inspected prior to June 30, 1920, 340 additional premises on which cedars were growing were found within the area. Information in regard to the requirements has been sent to all property owners concerned. Reports received from property owners indicate that all cedars have been removed from 216 premises and have been partially removed from many others. A large number will undertake to remove the cedar balls annually from the trees on their lawns and in cemeteries, in accordance with requirements and thus save them from destruction.

The following map shows the area included in the apple-growing



Union County, showing apple orchards.

section of Union County from which the red cedars are to be removed. The map was prepared in 1919. At that time there were about 6,000 acres in apple orchards, or one-twelfth of the area. There have been extensive plantings during the last two years, so that at the present time the acreage devoted to apple-growing is much larger.

The number of red cedar trees growing in this area was estimated to be about 75,000. Most of them are small and scattered through pastures and woodlands and have no commercial value. In a few places where the cedars are quite numerous, many of them are large enough for posts or telephone poles and have a small commercial value. It requires about 40 years for a cedar to become of sufficient size to make a 7-foot post, which is worth when ready for the market, about 30 cents. Hence, it will be seen that the growing of cedars cannot be profitable on land as valuable as that in Union County, especially when they are detrimental to the chief industry of the county.

Injury by the cedar rust was rather slight this year due to the fact that weather conditions during May and June were unfavorable to the successful transfer of the rust spores from the cedar to the apple.

FLAG SMUT.

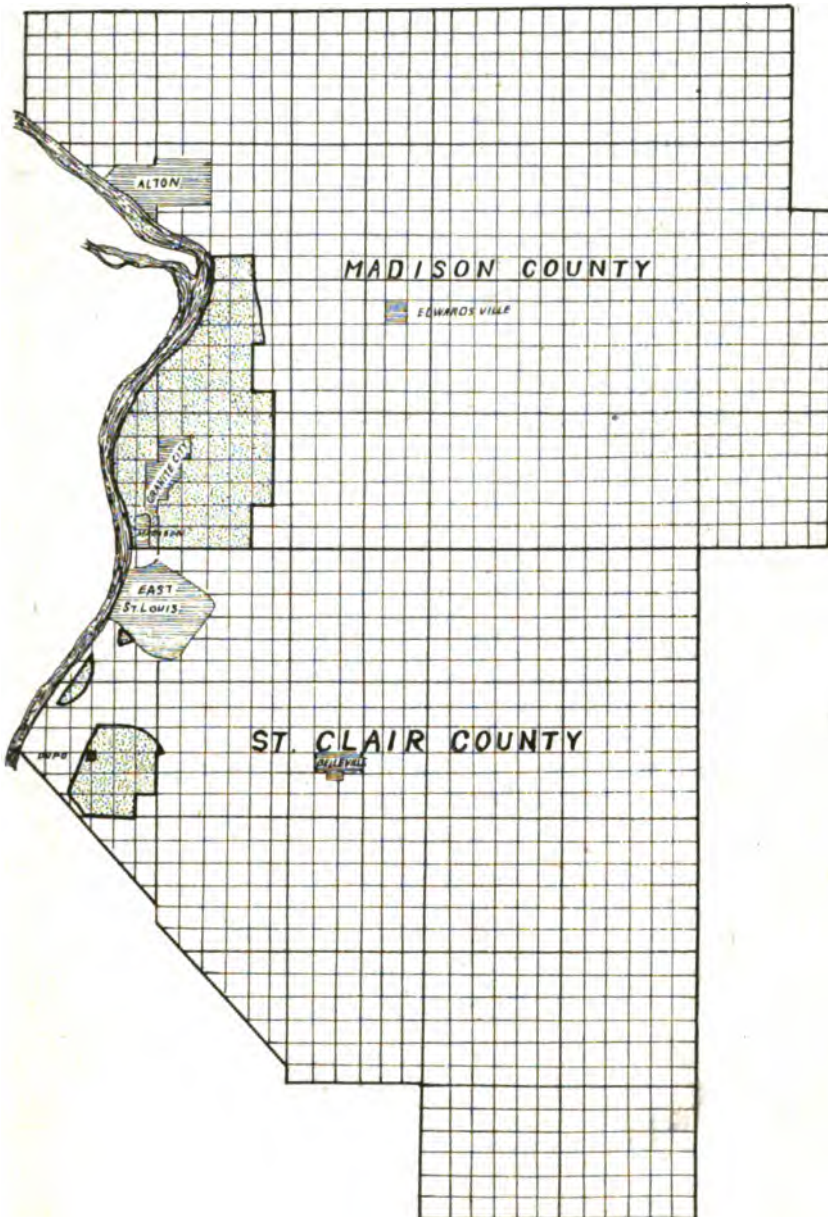
A field survey made in the infested area of Madison County prior to July 30, 1920, resulted in finding flag smut in 111 fields within an area of about 45 square miles surrounding Granite City. All the wheat in this area, amounting to about 275,000 bushels was disinfected at threshing-time, under the direction of inspectors of the department.

The Federal Bureau of Plant Industry, cooperating with the State Division of Plant Industry, disinfected all the seed wheat sown in this area in the fall of 1920 with the copper sulphate-lime treatment. For this purpose a large disinfecting plant was built at Nameoki, capable of disinfecting 1,000 bushels a day.

The use of straw was restricted to farm use and all straw remaining unused in the spring was burned.

In May and June of 1921 another survey was made over a much larger area. The Federal Bureau of Plant Industry also scouted in about 20 other counties along the Mississippi and Illinois Rivers. As a result flag smut was found in 218 fields in Madison County and a new area was found in St. Clair County, in which 40 infested fields were found. A hearing was held at Granite City June 25 and one was called at Dupu July 5. In the meantime preparations were made to disinfect all wheat in the infested areas as it was threshed and this work was in progress when the year closed June 30.

The following map shows the proposed quarantined areas in Madison and St. Clair counties in 1921. The proposed quarantined areas are indicated on the map by the stippling and the heavy surrounding lines. The boundaries are in most cases one mile beyond the outlying infested fields.



Flag Smut areas in Illinois.

The University of Illinois Agricultural Experiment Station and the United States Department of Agriculture have been carrying on experiments to ascertain what varieties of wheat, if any, are immune from the disease. Nine varieties of wheat out of 213 strains tested in two seasons' plantings appeared to be immune. Unfortunately, most of these strains are not grown commercially and it was impossible to procure seed in sufficient quantity to sow in the infested areas.

The present plan is to continue these experiments and to increase the planting of varieties found to be immune, or nearly so, as rapidly as possible, until sufficient seed is available to plant the whole infested area.

Of the types of wheat commonly grown commercially and adapted to the infested areas, the Turkey wheats and Red Wave are the least susceptible and these varieties will be planted this year.

It will be necessary to make a more extensive survey of the wheat-growing areas of the State next spring to locate other possible infested areas. Arrangements are being made for the cooperation of the Federal Bureau of Plant Industry and the State Natural History Survey Division in this work.

THE EUROPEAN CORN BORER.

The areas in Massachusetts, New York and northern Pennsylvania known to be infested by the European corn borer are continually increasing, owing partially to its natural spread in spite of State and Federal regulations and partially to the discovery of infested areas which had previously been overlooked. A new area in Canada along the north shore of Lake Erie in the vicinity of St. Thomas has been discovered, and it is probable that all the infested areas have not yet been found. The insect has not yet been found in Illinois.

QUARANTINES.

No new quarantines have been issued during the year. Those now in force are as follows:

Proclamation prohibiting the shipment of conifers for use as Christmas trees and Christmas greenery from the areas in the New England States quarantined by the Federal Government on account of the gipsy moth.

Proclamation prohibiting the shipment of chestnut trees from eastern states infested by the chestnut blight fungus.

Proclamation prohibiting the shipment into Illinois of the common barberry from all outside sources.

Proclamation prohibiting the shipment of five-leaved pines and all varieties of currants and gooseberries from the New England states and of five-leaved pines and black currants from New York, New Jersey, Pennsylvania, Ohio, Michigan, Wisconsin, and Minnesota on account of the pine blister rust.

Proclamation prohibiting the shipment of corn, broom corn and other products capable of carrying the European corn borer from the New England states, Pennsylvania and New York, on account of the European corn borer.

PROSECUTIONS.

There have been six prosecutions during the year, four for violation of the Plant Inspection Act, and two for refusing to comply with orders of the department. Four of the defendants plead guilty and were fined the minimum fine, \$10.00; one plead guilty, was fined \$25.00 and then appealed the case to the Circuit Court; and another agreed to comply with the regulations and the case was dismissed.

FINANCIAL STATEMENT.

FIFTY-FIRST GENERAL ASSEMBLY.

Appropriations.	Cash balance available June 30, 1920.	Expenditures July 1, 1920- Sept. 30, 1921.	Balance Sept. 30, 1921.
Salaries and wages.....	\$8,293	\$8,039	\$254
Office expense.....	360	359	1
Travel.....	2,862	2,862	-----
Operation.....	550	550	-----
Repairs.....	100	99	1
Equipment.....	813	811	2
Contingent.....	376	375	1
Disinfecting wheat in Madison County, Finance Department reserve.....	5,000	4,976	24
Total.....	\$18,354	\$18,071	\$283

DIVISION OF PLANT INDUSTRY—SEED INSPECTION.

ALBERT C. WILSON, *Chief Seed Analyst.*

The second year of this division has been a very busy one and the results obtained have been very satisfactory. The publicity and educational work started in the first year was continued by visits to the seedsmen, farm advisors and the attending of meetings where farmers were present in large numbers. These meetings included farmers' institutes, farmers' clubs and farmers' picnics. Eight hundred and fifty visits were made to seedsmen.

Articles for daily and weekly newspapers, also the farm papers and seed trade papers were written and addresses given explanatory of the seed law and the results being obtained. Assistance was given at the Stockmen's Short Course held at the College of Agriculture during January.

The district conferences of farm advisors, also their semi-annual and annual meetings, were attended and at each an opportunity was given to explain the operation of the seed and weed laws.

The exhibit prepared by this division consisted of charts descriptive of the work, samples of crop seeds showing how they should be tagged under the seed law, also samples of unsalable seed showing why it was unsalable. Mounts were made up to show the analysis of samples of seed while about ninety different weed plants were pressed and mounted under glass and properly named. This exhibit has a very great educational value and has proved very interesting to all who have taken the time to study it. Many farmers in visiting the exhibit have asked for information about some special weed that he is familiar with but of which he does not know the name. This exhibit enables him to locate the weed and connect up the name and the plant.

The exhibit was used at the Illinois State Fair; Illinois-Indiana Fair, Danville, Illinois; Edgar County Fair, Paris, Illinois; LaSalle County Fair at Ottawa and Mendota, part of it at the Big Rock Plowing Match at Big Rock, Illinois; Franklin County Fair, Benton, Illinois; Greene County Fair, Carrollton, Illinois, and at the International Live Stock Exposition, Chicago.

The weed mounts and samples of tagged seed were used at farmers' institute meetings in Coles, St. Clair, Ford and Crawford Counties. The entire exhibit was used at the Utility Corn Show in Galesburg and

again at the American Seed Trade Association convention in St. Louis, Missouri. A representative of this division always accompanied the exhibit and gave out bulletins on the seed law and weed control laws of the State, also answered inquiries regarding the work.

This publicity and educational work accomplished much good in getting farmers and others to understand the requirements of the law and this is reflected in the total number of samples sent in for analysis.

During the year 9,165 samples were analyzed and prompt reports made to the owners. Of this number 8,884 were sent by mail or brought to the laboratory by farmers and seedsmen. The inspectors of this division were assisted by some of the inspectors of the Division of Foods and Dairies and a total of 281 samples were collected from dealers.

The reports on all samples showed that 996 were unsalable for seeding purposes because the seed contained noxious weed seeds in greater proportion than the law would allow. Thirty-six of the unsalable samples were found among the samples taken by inspectors. In each case the owner was notified, also the wholesaler, who replaced the shipment with seed that would comply with the law.

The majority of the samples sent in for analysis were submitted by farmers showing that they are becoming more familiar with the law, also realize that the information furnished by an analysis of their seed is of value to them whether the seed is for sale or only for use on their farms. Many expressions of satisfaction with the law have been made both by farmers and seedsmen. It is their opinion that only the best seed should be sown.

The seedsmen are paying more attention to the quality of seed which they buy and in many instances are paying a premium for the seed which is free from weed seeds and inert matter. This will encourage the producer to give more attention to the control and eradication of weeds so that his crop will be as free from weeds, as possible, when harvested.

Many farmers have learned through the analysis of their seed that they could have saved much time and expense in recleaning the seed by going through the fields and cutting out the noxious weeds before harvesting the crop. This is especially true of curled dock as it is usually found in low places or where a straw stack has been in the field. Seed free from noxious weeds will bring a higher price and a more ready market.

The samples analyzed during the year consisted of the following number of each kind:

	Salable.	Illinois.	Outside the State.
Red clover		5,155	15
Timothy		1,084	1
Alsike		598	
Sweet clover		277	6
Mixture		301	2
Mammoth red clover.....		247	
Alfalfa		83	4
Millet		61	1
Red top		26	1
Sudan grass		22	1
Rape		12	1
Kentucky blue grass.....		8	
Buckwheat		1	
White clover			

The unsalable samples found during the year consisted of the following number of each kind:

	Illinois.	Outside the State.
Red clover	703	4
Timothy	55	
Alsike	91	
Sweet clover	37	
Mixture	37	
Mammoth red clover.....	25	4
Alfalfa	14	4
Millet	1	
Red top		
Sudan grass		
Rape		
Kentucky blue grass.....		
Buckwheat		
White clover	2	

The following table shows the number of samples in which the noxious weeds as mentioned in the law were found:

	Illinois.	From other states.	Total.
Curled dock	3,328	18	3,346
Buckhorn	1,591	13	1,604
Field sorrel	572	14	586
Wild carrot	103	1	104
Wild mustard	81	2	83
Dodder	76	3	79
Quack grass	18	5	23
Canada thistle	14	3	17
Ox-eye daisy	5		5
Corn cockle	2		2

The following list gives the names of common weed seeds found and the number of samples in which they appeared:

Black seeded plantain	2,068	Cheat	17	Cyperaceae sp.....	1
Green foxtail.....	1,901	Evening primrose..	11	White campion.....	1
Peppergrass	1,392	Flower of an hour..	11	Caraway	1
Smartweed	1,190	Yellow trefoil.....	11	Corn gromwell.....	1
Crabgrass	1,176	Wild sunflower.....	11	Convolvulus sp.....	1
Yellow foxtail.....	1,143	Velvet weed.....	10	Star thistle.....	1
Bracted plantain.....	1,129	Wild buckwheat.....	10	Trifolium sp.....	1
Ragweed	976	Mallow	9	Tumble weed.....	1
Witch grass.....	837	Panicum	9	Cephalaria	1
Spurge	609	Wild chicory.....	8	Composite sp.....	1
Prickly lettuce.....	494	Bull thistle.....	8	Field camomile.....	1
Pigweed or amaranth	403	Basil thyme.....	7	Dandelion	1
Lambs quarters.....	393	Wild rose.....	7	Eragrostis grass.....	1
Cinquefoil	348	Shepherd's purse.....	6	Green stipa.....	1
Barnyard grass.....	321	Wild lettuce.....	6	Gramina sp.....	1
Spina sida.....	233	Poverty weed.....	5	Black henbane.....	1
Horse nettle.....	171	Hoary vervain.....	5	Hedysarum coronatum	1
Paspalum	154	Black-eyed susan..	5	Hawkweed	1
Night shade.....	98	Bladder campion.....	4	Jimson weed.....	1
		Wild geranium.....	4	Lady thumb.....	1
		Gumweed	4		

Three-seeded mer- cury	84	Tumbling mustard.	4	Sow thistle.....	1
Tickle grass.....	77	Black mustard....	4	White top.....	1
Sticky cockle.....	72	Penny cress.....	4	Morning glory....	1
Sedge	66	Ox tongue.....	4	Mullein	1
Dog fennel or may- weed	63	White cockle.....	3	Motherwort	1
Wood sorrel.....	59	Cow cockle.....	3	Milkweed	1
Blue vervain.....	59	Russian knapweed..	3	Mint	1
Knotweed	45	Wild spurry.....	3	Marsh elder.....	1
Russian thistle....	45	Stink grass.....	3	Nut grass.....	1
Panic grass.....	31	Wild blackberry....	2	Pennyroyal	1
Heal all.....	30	Cleavers	2	Phaldris sp.....	1
Wood sage.....	27	Dragon head.....	2	Purslane	1
Hare's ear mustard	21	Hedge mustard....	2	Rush	1
Chickweed	21	Hemp nettle.....	2	Marsh spike grass.	1
Cress	21	Hedge parsley....	2	Squirrel tail grass.	1
Goosefoot	19	Spike grass.....	2	Sand bur	1
Rush grass.....	18	Stick tight.....	2	Birds foot trefoil..	1
Spike rush.....	17	Western wheatgrass	2	Roadside thistle...	1
Catnip	17	Ax seed	1	St. Barnaby's thistle	1
Buttercup	15	Yellow alyssum....	1	Trifolium supinum.	1
Yarrow	14	Butter and eggs...	1		
		Camomile	1		
		Western thistle....	1		

In the analysis of the samples received during the past year it was found that 70 samples contained 5 to 10 per cent, 18 samples 10 to 15 per cent, 8 samples 15 to 20 per cent, and 4 samples over 20 per cent of weed seeds other than noxious.

In the case of inert matter 273 samples contained 5 to 10 per cent, 43 samples 10 to 15 per cent, 13 samples 15 to 20 per cent and 10 over 20 per cent.

Where the percentages are greater than five it reduces the value of seed, therefore suggestion is made to reclean and submit another sample.

The unsalable samples are either recleaned and resampled or sold to dealers who have proper facilities for recleaning.

WEED CONTROL.

A very much greater interest in weed control was manifested during this year. This interest was aroused to a very large extent by the wide distribution of Bulletin 286 which gives the weed control laws of the State. Copies were sent to all Canada thistle commissioners because it gave the Canada thistle law in full. Articles on weed control and eradication were published in the daily and weekly papers in which the cooperation of all residents of the State was solicited in an endeavor to get the Canada thistle and other noxious weeds under control. The results obtained have been quite satisfactory and a more detailed account of the Canada thistle work will be made under separate report.

The following weed control project was prepared and presented to the farm advisors at their June, 1921, meeting in Urbana, Illinois:

STATE DEPARTMENT OF AGRICULTURE, DIVISION OF SEED INSPECTION.

University of Illinois, Agronomy Department; College of Agriculture, Division of Crop Extension, and Farm Bureau cooperating.

Title of Project—Weed Control.

Location—All counties.

Object—The production of clovers and timothy free from noxious and common weed seeds.

PREVIOUS WORK.

Very little work has been done in weed control except in an individual way, but since the enactment of the Illinois seed law, July 1, 1919, it seems apparent that more should be done along this line in order that all seed produced will comply with the law. During the season of 1920-21, 9,165 samples of seed were analyzed in the laboratory of the State Seed Analyst at Spring-

field and 996 samples were found to contain noxious weeds in greater proportion than the law would allow. Consequently the seed represented by these samples was unsalable for seeding purposes.

These results are better than those of the season of 1919-20, by 1½ per cent and show what can be accomplished when a standard of purity is established. Much improvement in the quality of seed can be made if weed control is given proper attention. In some counties last year advice was given regarding clover fields being cut for seed which resulted in a purer quality of seed, while in other cases where the advice regarding the cutting out of curled dock was disregarded, the owner lost \$6.00 per 100 pounds on his clover crop.

METHODS OF PROCEDURE.

(1) Give publicity as soon as possible regarding the importance of weed control in production of pure seed. Cutting weeds in all waste places, fence rows, roadsides and pastures.

(2) Advise the cutting or pulling of noxious weeds and removing them from the field before harvesting the crop of clover or timothy. Noxious weeds specified in the seed law are, Canada thistle, quack grass, dodder, wild mustard, wild carrot, buckhorn, curled dock, field sorrel, ox-eye daisy and corn cockle.

(3) Where fields are weedy in spots, such as low places or around old straw stacks, advise cutting and burning the crops on such spots before harvesting.

(4) After hulling and threshing, advise early recleaning and sampling during the recleaning by taking out about two handfuls of seed per bushel which should be thoroughly mixed and then two ounces for analysis taken from this.

(5) Advise getting the analysis of seed as required by the seed law, whether for use on their own farms or for sale.

(6) Where noxious weeds of any variety are very plentiful, advise special methods of eradication for same.

(7) Advise sowing only pure seed.

The weed control problem is one which must receive greater attention each year and will require special study in working out the proper methods to recommend for eradication of each troublesome weed.

Through the analysis of the samples of seed much valuable information is being obtained. Charts of the State can be prepared showing where the different weeds are most prevalent. It will also show what weeds are most frequently found in clover or grass seed from the different sections of the State where the seed is being produced.

WEED SURVEY AND STUDY.

As reported in the report of last year a weed garden was started at the University of Illinois, the work being done cooperatively by this division and the Crop Production Department.

This weed garden was 100 feet long by 50 feet wide and contained 43 rows, each 50 feet long. The following 65 different kinds of weed seeds were planted May 20 to May 22, 1920: Quack grass, hedge and field bindweeds, swamp smartweed, field sorrel, yarrow, wild onion, Mexican drop seed, butter and eggs, horse nettle, milkweed, curled dock, buckhorn, ox-eye daisy, dandelion, broad leaf plantain, darnel, knapweed, blue vervain, perennial sow thistle, wild carrot, white cockle, roadside thistle, burdock, wild barley, wild parsnip, evening primrose, wild lettuce, prickly lettuce, shepherds purse, peppergrass, dog fennel, cheat, rough cinquefoil, bracted plantain, corn cockle, sticky cockle, velvet weed, green and yellow foxtail, chickweed, wild and black mustard, crab grass, smartweed, tickle grass, white top, dodder, morning glory, black bindweed, barnyard grass, ragweed, tumble weed, cow cockle, spiny sida, Russian thistle, low amaranth, lambs quarters, rough pigweed, watercress, Jimson weed, sprouting crab grass.

The study of these weeds during their growing period developed some interesting information which if followed up for several years could be tabulated in a form that would be of value in the controlling of weeds.

Owing to the resignation of C. J. Markhus, who had charge of this work, it was not possible to continue it the second year; however, the information obtained is on file and can be added to when it is found possible to carry on the investigation.

In the study of weeds out in the fields Canada thistle seeds were collected and some were tested out for germination. Seeds collected near Decatur produced vigorous plants while others collected at Clinton and Champaign did not germinate.

The impression which some residents of Illinois had that Canada thistles would not produce seed in this State that would grow, is discredited. In all cases seed production should be prevented.

After seeding has been completed very few samples of seed are submitted for analysis, therefore, other work was arranged for. The weed control laws were given attention as weeds were at their best and needed attention. The inspectors visited the different counties in the north half of the State and were very greatly assisted by the cooperation of the farm advisers. Meetings of the Canada thistle commissioners were arranged for at which the law was discussed and explained. The commissioners who were not at the meetings were called on personally and the result has been a much greater activity in the work of Canada thistle control and eradication. In counties where Canada thistle commissioners were not appointed the supervisor was visited and asked to have an appointment made. There is still considerable work to be accomplished before this menace to the farmer is entirely destroyed.

The preparation and distribution by this division of identification cards, also letters of notification has put the work of the Canada thistle commissioner on a more business-like basis. It will require more educational work among the property owners before full cooperation of all is secured. By following up closely each year the accomplishments of the previous year it will not take many years to exterminate all weeds.

The annual meeting of the Association of Official Seed Analysts of North America was held in Chicago and was attended by two representatives of this division. At the sessions of the meeting valuable papers were read relating to the different lines of seed analysis and the discussions were helpful in bringing out the ideas of those who were present. The papers read on research work indicated that in preparing them much experimental and investigational work was done. There are still many problems to be studied and it is hoped that more research work can be done in connection with the work of this laboratory.

ANALYSIS FEES.

A total of \$606.85 was received during the year for analysis fees. A charge of 50 cents is made for the clovers and timothy, after five had been analyzed free and \$1.00 for the chaffy grasses in excess of the five free. Samples submitted by individuals or firms outside of the State were not considered in the free class, therefore each sample was paid for when analyzed.

These fees came principally from seed dealers who do not maintain a laboratory but have more than five samples during the year. Farmers very seldom have more than two or three samples to be analyzed; therefore, the expense to them is covered by the postage required to send in the seed.

COMPLAINTS.

A number of letters were received during the year in which complaint was made regarding the quality of seed sold. Some of these complaints covered seed shipped from other states. In most cases satisfactory adjustments were made, while in others the evidence was not sufficient to warrant prosecution.

Some complaints were made on oats, barley and wheat shipped from other states. These do not come under the law but when the matter was taken up with the shippers they were willing to take the necessary steps to have the customer satisfied.

A great many verbal complaints are made from time to time to the effect that some farmers are not complying with the law in selling seed to their neighbors. If this is true it will be necessary to impose the penalty. The farmer should be the last man to violate the law because it was enacted for his benefit and protection; therefore he should be willing to give to his neighbor the same advantages he would have in buying from the seed dealers and that is to see the quality of the seed before buying.

Many complaints were received regarding the neglect of Canada thistles. These were referred to the local Canada thistle commissioner with recommendations as to the best method of handling the matter. In some cases fines were assessed justly while in others they were unjust because due and timely notice had not been given to the owner of property. This matter will be given greater attention next season with the endeavor to have all property owners notified in writing when weeds are found neglected and must be taken care of.

Ignorance is no excuse for a violation of any law but a very great amount of educational work is needed before a strict compliance with the laws will be accomplished.

Two fields of clover in Edgar County were badly infested with weeds, especially buckhorn and bracted plantain. The dealer who sold the seed claimed it was free from buckhorn and without a sample of the

seed and the tag which accompanied the lot when sold it was impossible to establish a chain of evidence strong enough to convict.

While the farmer was the loser of a hay crop he put the land in soy beans and the results were quite satisfactory.

By plowing under the clover and immature weeds he prevented them from producing seed and becoming spread over his and the neighbors' land.

The samples of seed taken by the inspectors of this division will show how well the seed dealers are complying with the law.

There are some differences between the analyses as shown on tags and the analyses made in this laboratory. It has been considered that these differences were such as could be remedied; therefore letters with copies of the official analyses were sent to both wholesaler and retailer with the request that they check their records and advise results. In most cases the explanation was satisfactory and promises were made to the effect that greater care in sampling would be used, thus eliminating as far as possible the chances for differences.

The samples found to be unsalable were handled in much the same manner, except that a request was made to order the seed returned, which was very willingly complied with and better seed substituted or money refunded.

The policy of cooperation with seedsmen was followed with the hope that they would become entirely familiar with the requirements of the law and thus use greater efforts in complying with same.

The seed of the A. W. Schisler Seed Company of St. Louis as represented by the samples taken was not the quality desired in this State and it appeared as though they were not trying to comply with the law.

A hearing was granted the president of the company on the quality of seed shipped, at which he explained some difficulties in management which he thought accounted for the quality of the seed. He promised to make changes in his cleaning equipment and management and to engage a competent analyst so that there would be no cause for complaint in the future. How well he has carried out these promises will be determined when samples of his seed are taken next season.

The Plant Seed Company of St. Louis, Missouri, were having some difficulties in working out their analysis data, consequently, some lots of seed found to be unsalable were ordered returned and their methods checked up and corrected.

DIVISION OF STATE FAIR.

W. W. LINDLEY, *General Manager.*

More money was offered for premiums at the Illinois State Fair this year than ever before, the total amounting to \$153,684, of which \$17,642 was offered by live stock associations. Of the \$136,042 offered by the fair, \$113,304, or a little more than 83 per cent, was paid to exhibitors. Of the \$17,642 offered by the breed associations, over \$15,000 was paid out by them.

There was a marked increase in the number of beef cattle exhibited at the 1921 State Fair, 874 being shown as against 560 in 1920. Beef cattle exhibitors numbered 85 and represented 15 states; viz., Illinois, Indiana, Virginia, Ohio, Mississippi, Nebraska, Tennessee, Oklahoma, Missouri, Wisconsin, Kentucky, Colorado, Kansas, Iowa and Michigan. In 1920 there were 66 exhibitors representing 10 different states.

In the dairy cattle section in 1920, there were 38 exhibitors with 516 cattle, and in 1921, 79 exhibitors with 430 cattle. Eleven states were represented in the 1920 show and 8 states in the 1921 show. The large increase in the number of exhibitors with a decrease in the number of cattle shown indicates fewer large herds but a more widespread interest among the smaller breeders.

In 1920, 47 exhibitors representing Illinois, Iowa, Maryland and New Hampshire showed 252 heavy horses and in 1921 there were 51 exhibitors from Illinois and Indiana with 361 heavy horses. This year there were 232 light horses exhibited from Illinois, New Hampshire, Oklahoma, Kentucky, Missouri, Indiana and Canada. Last year there were 196 animals exhibited in this section.

There was a decided increase in the number of mules and jacks this year, 105 being exhibited as compared with 61 in 1920. In the sheep section this year 50 exhibitors, representing Illinois, Indiana, Iowa, Wisconsin and Ohio, exhibited 635 sheep. A new feature this year was a class for milch goats, in which class 4 exhibitors showed. In the swine section there were 234 exhibitors representing Illinois, Iowa, Missouri, Kansas, Indiana, Michigan, Wisconsin and Tennessee. The number of hogs totaled 2,649.

BEEF CATTLE.

	Number exhibitors.		Total number animals.	
	1920	1921	1920	1921
Shorthorns.....	27	35	189	340
Milking shorthorns.....	5	4	75	47
Herefords.....	20	23	168	236
Aberdeen Angus.....	5	8	41	80
Red Polls.....	6	9	56	99
Polled Shorthorns.....	3	3	31	34
Galloways.....		3		38
Total.....	66	85	560	874

DAIRY CATTLE.

	Number exhibitors.		Total number animals.	
	1920	1921	1920	1921
Holstein Friesians.....	12	30	112	147
Guernseys.....	8	15	132	55
Jerseys.....	5	17	82	90
Ayrshires.....	3	3	62	64
Brown Swiss.....	6	14	84	74
Devons.....	4		44	
Total.....	38	79	516	430

HEAVY HORSES.

	Number exhibitors.		Total number animals.	
	1920	1921	1920	1921
Percherons.....	22	19	106	129
Shires.....	15	13	94	80
Clydesdales.....	5	8	23	50
Belgians.....	3	7	13	72
Draft horses and teams.....	2	4	16	30
Total.....	47	51	252	361

SHEEP.

	Number exhibitors.		Total number animals.	
	1920	1921	1920	1921
Shropshires.....	12	11	200	177
Oxfords.....	4	5	53	59
Hampshires.....	3	3	53	49
Southdowns.....	4	4	48	48
Cotswolds.....	3	4	28	51
Cheviots.....	4	5	47	68
Dorsets.....	3	2	53	25
Leicester and Lincoln.....	1	2	14	25
Rambouillet.....	3	4	32	45
Delaine Merino.....	3	3	38	30
American Merino.....	3	3	44	27
Tunis.....				
Karakul.....				
Corriedale.....				
Milch Goats.....		4		38
Total.....	43	50	610	635

SWINE.

	Number exhibitors.		Total number animals.	
	1920	1921	1920	1921
Duroc Jerseys.....	74	76	873	792
Poland China.....	57	63	484	560
Berkshires.....	12	14	153	172
Chester Whites.....	28	33	370	430
Hampshires.....	38	27	480	402
Spotted Poland China.....	21	15	295	201
Tamworths.....		3		45
Yorkshires.....	5	3	65	47
Total.....	235	234	2,700	2,649

DIVISION OF AGRICULTURAL STATISTICS.

S. D. FESSENDEN, *Agricultural Statistician.*

The work done in this division during the year has considerably increased in volume. Cooperation with the Bureau of Markets and Crop Estimates of the United States Department of Agriculture in the preparation and dissemination of monthly crop and live stock reports has been continued and has been extended somewhat further than during the preceding year.

While the United States Government reports, upon which our State reports are based, present their information for the State as the smallest unit our State reports give the information by counties, answering in this way what has been a widespread demand for local information.

In addition to our regular monthly reports a brief statement, giving in general terms the agricultural conditions in the State, has been prepared weekly and given to the public. These weekly statements have met with great favor and seem to fill an almost universal want.

For the second time, the tax assessors of the State, under the provisions of an act approved June 28, 1919, have gathered agricultural statistics of the acreages of the principal crops and of the numbers of live stock and poultry. These returns are just being received and will be tabulated and published as soon as possible.

A feature of the work of the division that has developed greatly during the year is the dissemination of agricultural information in answer to inquiries made. Requests for such information are being received in ever increasing numbers not only from the State but from practically all quarters of the United States. It is our rule to furnish the information asked for whenever possible and when not available to direct the inquirer to the source, if known, from which it can be obtained.

SUMMARY OF AGRICULTURAL CONDITIONS.

The principal crops harvested in Illinois in 1920 were not quite up to the average in production. Quality also was a little below the average with the exception of oats which were unusually good. Vegetation suffered considerably at times from drought and insect pests but as a rule conditions for most of the crops improved greatly towards the end of the growing season. Illinois maintained its high position in the aggregate value of all crops produced, being outranked in this respect by Texas and Iowa alone.

The close of the year 1920 showed all classes of live stock in good health but considerably reduced in numbers from the previous year. Unsatisfactory prices received by the farmers was undoubtedly the principal cause of this reduction.

Winter wheat sown in the fall of 1920 on a considerably smaller acreage than the previous year made a fine stand and started into the spring of 1921 with an unusually good condition. Freezes in March and April caused some damage and the hot dry weather following tended to reduce yields. In a number of the counties chinch bugs and the Hessian fly did some injury to the plant. This damage however was not extensive and now (June 30) with harvest nearly over a considerably larger crop than that of last year seems certain.

Spring wheat and barley have been sown on slightly smaller acreages than last year and oats on a slightly larger one. None of these crops made a good start and hot dry weather has retarded their growth. Prospects of large yields are poor.

The acreage planted to corn this year is practically the same as in 1920. The plant has made a fine start and so far the conditions have been ideal for growth and development. Cultivation is a little backward and some fields are rather weedy, the corn ear worm is showing up in rather unusual numbers and seems likely to do some damage.

A condition approaching drought has existed for some weeks in practically all sections of the State and unless it is soon broken deterioration of many crops will begin.

Report of
THE DEPARTMENT OF LABOR
July 1, 1920 to June 30, 1921

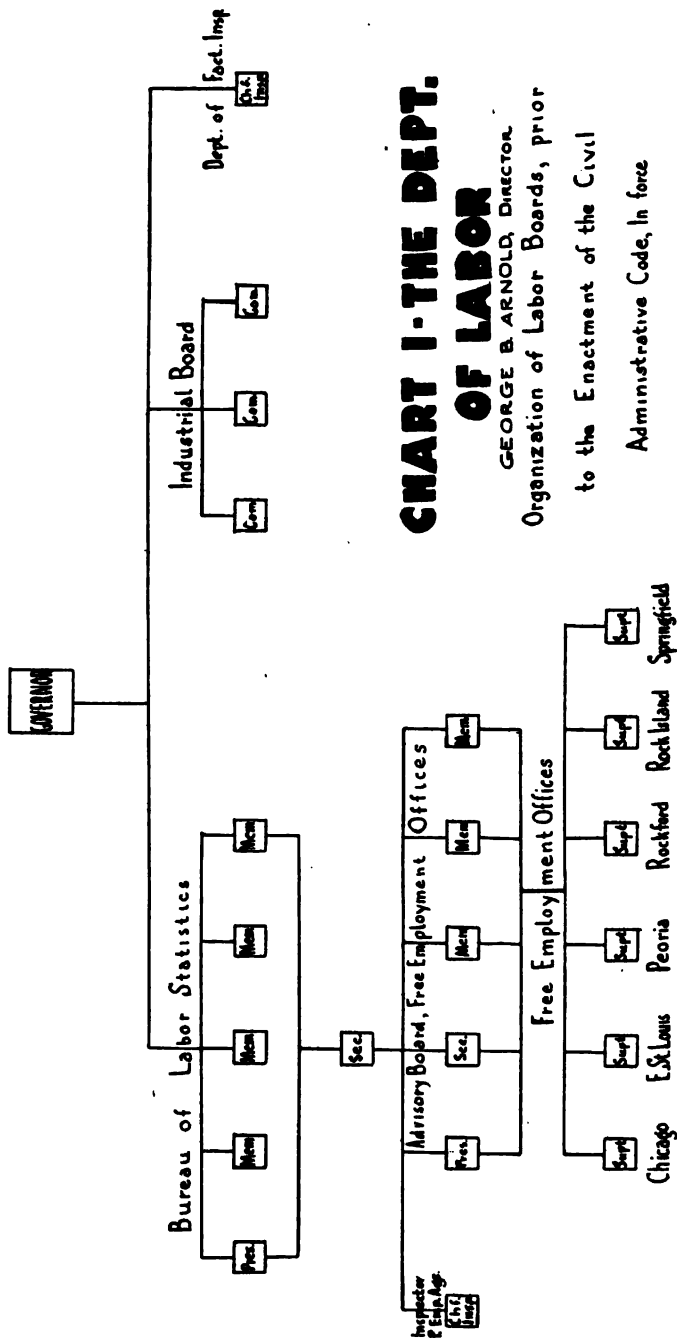


CHART I-THE DEPT. OF LABOR

GEORGE B. ARNOLD, DIRECTOR
Organization of Labor Boards, prior
to the Enactment of the Civil

Administrative Code, in force

July 1, 1917

STATE OF ILLINOIS.
THE DEPARTMENT OF LABOR.

GEORGE B. ARNOLD, *Director.*

BURT C. BEAN, *Assistant Director.*

W. C. LEWMAN, *State Superintendent of Free Employment Offices.*

DIVISIONS.

DIVISION OF LABOR STATISTICS.

BURT C. BEAN, *Acting Secretary.*

CHICAGO FREE EMPLOYMENT OFFICES.

CHARLES J. BOYD, *General Superintendent.*

EAST ST. LOUIS FREE EMPLOYMENT OFFICE.

ROY E. STACER, *Superintendent.*

PEORIA FREE EMPLOYMENT OFFICE.

THOMAS METTS, *Superintendent.*

ROCKFORD FREE EMPLOYMENT OFFICE.

PETER T. ANDERSON, *Superintendent.*

ROCK ISLAND FREE EMPLOYMENT OFFICE.

FRED W. RINCK, *Superintendent.*

SPRINGFIELD FREE EMPLOYMENT OFFICE.

LUTHER O. GERMAN, *Superintendent.*

AURORA FREE EMPLOYMENT OFFICE.

FRANK RADUENZ, *Superintendent.*

BLOOMINGTON FREE EMPLOYMENT OFFICE.

JOHN E. MATTHEWS, *Superintendent.*

DECATUR FREE EMPLOYMENT OFFICE.

DAN DINNEEN, *Superintendent.*

DANVILLE FREE EMPLOYMENT OFFICE.

W. J. PAYNE, *Superintendent.*

JOLIET FREE EMPLOYMENT OFFICE.

L. ROGERS, *Superintendent.*

CHICAGO COLORED FREE EMPLOYMENT OFFICE.

L. W. TUCKER, *Superintendent.*

BOARD OF FREE EMPLOYMENT ADVISORS.

F. S. DEIBLER, PH. D., *Chairman.*

A. H. R. ATWOOD, M. D., *Secretary.*

OSCAR G. MAYER.

MRS. RAYMOND ROBINS.

JOHN H. WALKER.

CHIEF INSPECTOR OF PRIVATE EMPLOYMENT AGENCIES.

JOHN J. MCKENNA, *Chief Inspector.*

FACTORY INSPECTION.

JAMES A. SHORT, *Chief Inspector.*

INDUSTRIAL COMMISSION OF ILLINOIS.

CHARLES S. ANDRUS, *Chairman.*

PETER J. ANGSTEN.

ROBERT EADIE.

JAMES A. CULP.

OMER N. CUSTER.

Mediators and Conciliators: ERNEST WITTHALL, ROBERT OSBORNE.

SCOPE OF THE DEPARTMENT OF LABOR, TOGETHER WITH DUTIES OF THE VARIOUS DIVISIONS—JULY 1, 1920, TO JUNE 30, 1921.

The general function of the Department of Labor is "to improve labor conditions." (See section 43, The Civil Administrative Code for specific functions.) The supervisory duties of the department are to see that the work of the various divisions is legally, creditably and efficiently performed. This general supervision extends over all divisions with the exception of the Industrial Commission in which the department has no supervision in-so-far as judicial decisions are concerned. A Director and Assistant Director constitute the executive officers of the executive office. Location, Room 113 The Capitol, Springfield, Illinois.

Division, (former name if different) supervision officer and location.	Functions.	Laws enforced (under the direction of the Director of Labor).
Division of Labor Statistics, (formerly Bureau of Labor Statistics) Secretary, Room 113, The Capitol, Springfield, Illinois.	Arrangement of such statistics as are reported by the Department of Labor.	Rehabilitation Act of 1920. Accident Report Act of 1907.
Division of State Superintendent of Free Employment Offices, (new under the Civil Administrative Code) Room 113, The Capitol, Springfield, Illinois.	General superintendence of the various free employment offices.	Free Employment Agency Act.
Division of Chicago Free Employment Offices, General Superintendent, 116 N. Dearborn St., Chicago, Illinois.	Local supervision of the Chicago offices and superintendence of the main office.	Free Employment Agency Act (in Chicago).
Division of East St. Louis Free Employment Office, Superintendent, Cor. Main and Division.	Maintaining free employment office in East St. Louis.	Free Employment Agency Act (in East St. Louis).
Division of Peoria Free Employment Office, Superintendent, 512 S. Adams St., Peoria, Illinois.	Maintaining free employment office in Peoria.	Free Employment Agency Act (in Peoria).
Division of Rockford Free Employment Office, Superintendent, 118 N. Wyman St., Rockford, Illinois.	Maintaining free employment office in Rockford.	Free Employment Agency Act (in Rockford).
Division of Rock Island-Moline Free Employment Office, Superintendent, 1915 Fourth Av., Rock Island, Illinois.	Maintaining free employment office in Rock Island.	Free Employment Agency Act (in Rock Island).
Division of Springfield Free Employment Office, Superintendent, 208-10 N. 4th St., Springfield, Illinois.	Maintaining free employment office in Springfield.	Free Employment Agency Act (in Springfield).
Division of Aurora Free Employment Office, Superintendent, 13 N. Broadway, Aurora, Illinois.	Maintaining free employment office in Aurora.	Free Employment Agency Act (in Aurora).
Division of Bloomington Free Employment Office, Superintendent, 404 N. Main St., Bloomington, Illinois.	Maintaining free employment office in Bloomington.	Free Employment Agency Act (in Bloomington).
Division of Decatur Free Employment Office, Superintendent, 226 E. North St., Decatur, Illinois.	Maintaining free employment office in Decatur.	Free Employment Agency Act (in Decatur).
Division of Danville Free Employment Office, Superintendent, Chamber of Commerce Building, Danville, Illinois.	Maintaining free employment office in Danville.	Free Employment Agency Act (in Danville).

SCOPE OF THE DEPARTMENT OF LABOR, TOGETHER WITH DUTIES OF THE VARIOUS DIVISIONS—JULY 1, 1920 TO JUNE 30, 1921—Concluded.

Division, (former name if different) supervising officer and location.	Functions.	Laws enforced (under the direction of the Director of Labor).
Division of Joliet Free Employment Office, Superintendent, 412 VanBuren St., Joliet, Illinois.	Maintaining free employment office in Joliet.	Free Employment Agency Act (in Joliet).
Division of General Advisory Board for the Illinois Free Employment Offices, five members, one of whom is Secretary; one of whom is Chairman. 116 N. Dearborn St., Chicago, Illinois.	Maintaining contact between the free employment offices and immediate locality in which the office is located.	Sec. 8, Civil Administrative Code.
Division of Chief Inspector of Private Employment Agencies, (formerly Commissioners of Labor) Chief Inspector, 608 S. Dearborn St., Chicago, Illinois.	Inspection of private employment agencies as a basis for recommendations for issuance and revocation of licenses.	Private Employment Agency Act, 1909.
Division of Factory Inspection, Chief Inspector, 1543 Transportation Building, Chicago, Illinois.	Regulation of industry and labor through the enforcement of the various labor and factory laws.	Women's Ten Hour Law, Child Labor Law, Health, Safety and Comfort Law, Wash House Law, Occupational Disease Law, Structural Law, Blower Law, Basement Blower Law, Garment Law, Bedding Law.
Industrial Commission of Illinois, (formerly Industrial Board) five members one of whom is Chairman, 303 City Hall Square Building, Chicago, Illinois.	Adjudication of the Workmen's Compensation Act. Through the Mediators and Conciliators, acts as arbitrator in industrial disputes.	Workmen's Compensation Act. Arbitration Act.

THE DEPARTMENT OF LABOR—EXECUTIVE OFFICE.

GEORGE B. ARNOLD, *Director.*

The present Director of the Department of Labor took active charge February 1, 1921, so that this report covers a period of seven calendar months under the executive direction of the previous Director, and five months under the present chief executive officer.

As the change was anticipated and the routine of the administrative report was already well established, the present report is an uninterrupted transcript of the main events of administrative routine, policy and procedure.

Covering the fiscal year beginning July 1, 1920, and ending June 30, 1921, and conforming to a policy already established, this report has been made as brief as is consistent with thoroughness and yet is voluminous and exact enough to show to all interested—as well as to the chief executive of the State—what has been accomplished during the fiscal year.

ORGANIZATION OF THE DEPARTMENT.

The general organization of the department is shown in the accompanying chart facing page 128. Reference to this chart will tend to show clearly the relationship of the various divisions, the consequent apportionment of the space in this report, together with the various points of view from which different officers have prepared their reports.

The Assistant Director of the department, a part of whose work for the last fiscal year has had to do with the Division of Labor Statistics and enforcement of the Rehabilitation Act, has been instructed to confine his report to that subject matter. From his experience during the last four years he has made several tentative recommendations to me. These, from my investigation and survey of the department seem to be well grounded.

The State Superintendent of Free Employment Offices, who has had a comparatively free rein in supervising the work of various free employment offices in the State since his appointment effective July 1, 1917, has been asked to review the happenings of the past four years, and also to make such tentative recommendations as he may deem advisable, these being based upon his past experience in the department.

The reports of the various free employment offices under the immediate supervision of the State Superintendent have been prepared in conformity to the general custom which has obtained in preceding

years. A general uniformity in treatment and, in many cases, similar recommendations by those in charge of these offices, seem to show that the management of the free employment offices in Illinois is becoming standardized. Where either administrative authorization or legislation is uniformly asked by local superintendents, such requests may, therefore, be considered as being well grounded.

The Division of General Advisory Board for the Free Employment Offices, remains substantially the same in personnel this fiscal year as the last. Its report is based upon statistical findings which make up the greater part of the paper submitted.

The Division of Chief Inspector of Private Employment Agencies again presents a most satisfactory report. This can well be brief. Much of the work done can hardly be made to show in a report, as it is a record of satisfactory adjustments—cases which have been settled without recourse to the courts—and to the satisfaction of both the complainant and the agency.

The Division of Factory Inspection having reported for the three years previous on the functions of the various laws and how these work out in detail in administration, this fiscal year submits a report based to a greater degree than previously upon its office statistics. As this office again settles into its customary routine, it is planned to require reports on alternating years which are statistical in character one year and more of an editorial nature the following year. This will provide a satisfactory basis for both statistical records and the information required by those interested in the just and correct enforcement of our factory laws.

The report of the Division of Industrial Commission of Illinois follows its usual lines. Under the provisions of the Civil Administrative Code the commission adjudicated the Workmen's Compensation Act without supervision or influence on the part of the Department of Labor. The mediators and conciliators under a voluntary arbitration law were placed, by the Code, under the supervision and direction of the Director of Labor and the arrangement by which they maintain their offices with the Industrial Commission and are routed from that office seems to be an ideal one and one that well may be continued.

SUGGESTIONS AND RECOMMENDATIONS.

In general, the recommendations made by the various appointive and civil service officers may be considered as being based upon their experience and conforming to the judgment they have shown in past administration and supervision. The Director at the present time is not so much interested in individual recommendations as he is in bringing the various functions of the individual divisions in the department into a state of harmony, that these may work to the greatest advantage for all concerned. The Civil Administrative Code has been in operation,



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at the date of this writing, four years. It is not to be supposed that any legal administrative document of such length and import could be drawn so as to cover all cases which might arise. Much has been left to the discernment of the directors, it would seem. Indeed, the code almost presupposes a considerable fund of common sense on the part of the enforcing officer and his helpers. Particularly is this true in reconciling the overlapping functions of the different divisions and, through office routine, reducing to the smallest possible degree the duplication of needful work and the elimination of work that may prove of little or no value.

In older divisions customs have grown up which may, merely because of their age, bear the weight of authority. When these are compared with the more modern methods introduced in the newer divisions a basis is afforded for comparison, which makes it comparatively easy to determine whether the new or the old is better, or whether a blend of the two will yield the best results.

It will be appreciated, it is believed, that the beginning of work is hardly the time to make extended recommendations as to administrative matters. Certain progressive features touching labor and wholesome surroundings of employment have been referred to in your Excellency's speeches and addresses. These references and principles will be made a guide in all matters in departmental administration to which they appertain.

Where methods have worked satisfactorily during the last four years of the Civil Administrative Code in this department, these will be scanned closely as a means of establishing a precedent for the work of the coming three and one-half years. Where methods do not seem to have stood the strain of satisfactory administration during the past four years, these methods will be studied with care with the idea of determining whether the fault is in the one administering the law, the manner in which the law was administered, or in the law itself. Once this is determined the remedy will be simple.

SOME OF THE MORE WEIGHTY PROBLEMS.

All the problems which arise following the close of a war period are reasonably sure to present themselves during the coming fiscal year. It will be greatly a matter of prudence to be prepared for these problems—as they are pretty sure to be with us.

First in the line of probability is that of unemployment. It has been the universal rule that, following a war of any considerable size or degree of intensity, the problem of unemployment has arisen. The factories which have been running at a high rate of speed, with every attempt to increase output suddenly find their output uncalled for or the demand greatly dwindling. Workmen who have been employed overtime, as a consequence, not only find the overtime reduced but in

many cases they are thrown out of work. In addition to the workers thrown out of employment, the problem of the returning soldier is also to be considered.

UNEMPLOYMENT.

It is a striking commentary on one of the principal functions of the Department of Labor that the original idea of establishing the free employment offices was that of providing for the unemployed. The immediate history of the past four years shows that, during the war period, the free employment offices performed a function the exact opposite of that originally thought out by the framers of the employment law. The employment offices were put to it to secure workers for the various industries. With after-the-war problems at hand, however, the original function of the free employment offices, as planned by the proposers of the first law, will become operative. "Relieving unemployment" will then be an actuality.

THE WAGE PROBLEM.

As the country shades from scarcity of labor to unemployment another problem arising out of this condition is bound to come to the front. This is the wage problem. While the Department of Labor has neither legislation nor appropriation which makes it possible to gather any extended general or basic labor statistics, yet the specific problems which may arise from that condition may affect the department. The mediators and conciliators have been and are called upon to adjust differences between employer and employed which ordinarily have, as their basis, a proposed reduction of wages. Wage reduction, in fact, is one of the most difficult questions to mediate, even in the face of unemployment. This being true, it is possible that the information that will be secured on unemployment during the next year or two may well be made the basis for certain recommendations having to do with the enactment of a law touching wages and the gathering of wage statistics.

Any commission appointed to take up the subject of wages in Illinois would find itself considerably handicapped by the lack of up-to-date information. The rate of wage paid is vital to the entire labor situation. Too low wage invariably not only brings about want and distress, but increases the work of the Department of Labor to an appreciable degree.

The department has cooperated in the past with the Federal Department of Labor in gathering some wage statistics in certain industries in some of the larger cities in the State. This work could be made to furnish a basis showing the methods to be used in procuring, arranging and tabulating such statistics.

REGULATION OF LICENSED EMPLOYMENT AGENCIES.

Second among the problems of the department and one having to do with the employment situation is the matter of regulation of licensed

employment offices. When the need for a job is great there is every temptation to take advantage of this fact by charging the patron a high price for bringing worker and employer together. Certain high grade agencies seem careful always to maintain a scale of charges which are well within reason. Other agencies, seeing the throngs of applicants for each job are tempted to capitalize the "other fellow's misfortune," by making him pay as much as he can for securing employment.

It is my understanding that a committee of the highest grade employment agencies in Chicago have in the past advised the Department of Labor of willingness to aid in sponsoring an employment law which will tend to correct this evil. Various leaders high in the councils of organized labor have also announced their willingness to serve on a committee of this kind. The present chief inspector of private employment agencies has had a wealth of successful experience in dealing with this problem. There are other sources of note, and during the next period of unemployment is a good time to make the necessary observations for such legislation. This done, when the legislature convenes there could be placed before that body, a concrete proposal for a law or an amendment to the present law, satisfactory to all parties concerned, which would amply protect the exploitation of the one in search of a job.

THE PROPER COLLECTION OF STATISTICS.

Third among the problems of the department is the entire statistical problem which is mentioned in the report of the Division of Labor Statistics. The present Rehabilitation Act, given in detail in the report of the Division of Labor Statistics can well, it is believed, be enforced during 1921 and 1922 though there is no specific appropriation for its enforcement. As the need for the employer to report on the number of soldiers and sailors re-employed, grows less each year, it might be well to ask for the enactment of a law taking the place of the Rehabilitation Act. The employer has become accustomed to reporting under this act and it works no particular hardship on him, as a clerk can furnish the required information from the company's books after a short investigation. By transforming this Rehabilitation Act into a census act with the requirements spoken of later in this and in other reports of the Department of Labor, a faulty statistical condition would be adequately provided for.

OCCUPATIONAL DISEASE LAW EXTENSION.

Fourth among the general recommendations is that the Occupational Disease Law be extended so as to include the recognition of compensation for occupational disease contracted while in the employ of the person, firm or corporation. The legislation of other states and the recommendations of those thoroughly conversant with the subject as given further on in this report may be the basis for action.

RELATIONSHIP OF THE STATE AND FEDERAL DEPARTMENTS OF LABOR.

Many of the functions of the Illinois Department of Labor are similar to or have been made the pattern for work by the Federal Department. As an instance, the Federal Child Labor Law has many points of similarity with the Illinois law, the latter being originally enacted twenty-nine years ago.

It would seem that with the great field open for work in raising the standard of labor conditions throughout the United States, the overlapping of Federal and State laws might be prevented by the appointment of a permanent committee to confer with the Federal Department of Labor so that harmony might be maintained between the Federal branch and the State branch of labor administration.

As soon as the unemployment situation grows less acute, this department may, therefore, do some basic work to determine what can be done that future national and State labor legislation be made to reenforce each other, rather than overlap and interfere.

APPRECIATION.

The department wishes to acknowledge hearty appreciation of the many courtesies extended by the outgoing legislature and to thank that honorable body for considerate and courteous treatment. Fellow workers, also, throughout the department have cooperated willingly in making any changes in routine or administration which seemed necessary. The public also has shown a changing opinion toward labor and the department representing the worker. With a constantly growing list of workers in industry, increasing to a degree greater than the average increase in population; with the increasing complexity of industrial life—which tends to wear out the worker long before his normal period of usefulness would be ended; and with the growing sentiment to see that workers of every class and line receive just and due treatment, it is felt that the importance of labor as a factor in industry and our national growth and welfare is even more firmly established and recognized.

DIVISION OF LABOR STATISTICS.

BURT C. BEAN, *Assistant Director, Acting Secretary.*

During the four years the Civil Administrative Code has been in effect, the Division of Labor Statistics has called for comparatively little attention. This has not been the result of neglect; it is due solely to the fact that the Department of Labor lacks legislation which makes efficient functioning along statistical lines difficult and costly, if not impossible. Certain important deductions may be made, it is true, by the various divisions, from statistical information compiled by them, but correlated information of a high degree of value cannot be secured under the present laws.

Reference only need be made to the First Annual Report of the Department of Labor, for the fiscal year closing June 30, 1918—the first year under the Civil Administrative Code—to see in what state one phase of the statistical situation was—and is—in, in the Department of Labor, as there has been little change since that time, in the laws mentioned. Inasmuch as the same situation, with the exception of the changes noted, exists, today as it did the first year of the Civil Administrative Code, the following extract from the above named report is given:

METHODS OF REPORTING ACCIDENTS BY EMPLOYERS IN ILLINOIS.

By an act effective July 1, 1907, it was made the duty of every employer in the State of Illinois employing laborers, mechanics, miners, clerks, or other servants, or employees of any character, to make an immediate report to the Bureau of Labor Statistics of every fatal accident, and also to make a report of every non-fatal accident by which the one injured was incapacitated for thirty days or more.

Under an act which became effective January 1, 1910, known as "An Act to Provide for the Health, Safety and Comfort of Employees," it is the duty of the owner, lessee, superintendent or person in charge of any factory, mercantile establishment or work shop in the State of Illinois, to send an immediate report of all fatal accidents to the Chief State Factory Inspector. This act further provides that between the 15th and 25th of every month, such employers shall report injuries occurring to their employees during the previous calendar month, entailing a loss of time of fifteen successive days or more.

A subsection of that section provides that the reporting of accidents as provided, releases any employer making such reports from reporting to any other State officer, board or commission.

Under an act enforced July 1, 1917, known as the "Workmen's Compensation Act," it is made the duty of every employer in the State of Illinois operating under the provisions of that Act, to make an immediate report of all fatal accidents to the Industrial Commission, and further provides that such employer shall report to the Industrial Commission, between the 15th and 25th of each month, all accidental

injuries to employees, entailing a loss to the worker of more than one week's time. A part of that section provides that the making of reports as provided in the Workmen's Compensation Act shall release the employer under provisions of said act from making such a report to any other officer of the State.

Compliance with the law for reports as provided by the Workmen's Compensation Act and the Health, Safety and Comfort Act, seems to relieve the employer of the need of reporting under the 1907 law, although that law has never been directly repealed. The Workmen's Compensation Act, being the latest of these acts passed and requiring a report on the loss of time of the least number of days and seeming to cover all of the factories, mercantile establishments, etc., affected by the Health, Safety and Comfort Act, seems to take away certain reportorial requirements from the latter. Accident reports as now made to the Industrial Commission are also reported, in part, to the office of the Factory Inspector and further cooperation between those offices is planned.

One of the provisions of the Mining Act requires an immediate report of all fatal accidents, through the Division of Inspection, the Department of Mines and Minerals. At the end of the fiscal year a report on all non-fatal accidents entailing a loss of thirty days time or more in coal mines is assembled for that department.

A section of the Public Utilities Act requires that every public utility shall make report of accidents to the Public Utility Commission.

It is plainly evident that there is considerable conflict in the laws governing accident reporting. Confusion consequently results, as the employer is not certain to whom a report is to be forwarded, and often is in doubt as to what accidents are to be reported. The department plans to ask—after consultation with all departments concerned—for a law covering a simplified system of accident reporting. This, if obtained, will be greatly to the advantage of both employer and employed and make possible accurate deductions of conclusions having to do with accidents in industry.

The interpolations show concisely the changes that have been made, and it needs little time spent in deduction to note not only the fact that legislative matters move slowly in correcting statistical faults, but that there is no adequate basis of comparison for statistics when these are arranged.

What is most needed to make the Division of Labor Statistics of great value to the State is some means of taking an industrial census so that there may be a basis of comparison for the tables that are now being compiled by some of the various divisions of the department.

As to exactly the manner in which this information should be gathered, there has been considerable discussion—mainly touching on the ways in which it cannot be done. The utter failure of a committee which was appointed to bring about something to secure uniform statistics, not only for the Department of Labor, but for the various departments of the State, is to be borne in mind. It was the belief that something might be done to secure uniform statistics throughout the State and a committee did some work toward that end. The proposers of the plan had a definite idea in mind—that of first securing legislation which would make automatic the taking of a census, and then unify the many divergent systems in use in the State so that these would connect up with the census. As it was felt that enlightenment was needed, an

"eminent statistical authority" was secured—his remarks listened to with respect and the matter was permitted to die a natural death.

The field for promoting statistical uniformity, therefore, remains open and should be an attractive one to those who have an interest in securing efficiency in the expenditure of time and effort.

The efforts of the committee referred to showed that a uniform system of statistics would be of interchangeable value and the more enthusiastic ones seemed to think that the subject was of importance enough to warrant some centralized body being authorized by legislation, this division to be under the jurisdiction of the Department of Finance and the information so secured to be transmitted to the various departments as needed. Others regarded the statistical problem as being necessarily contained within the individual departments, and looked with scant favor on any centralization. However, these questions seem rather academic, inasmuch as the discussion was followed by little or no action.

From the experience of the department, it would seem that the census being the important feature, that those interested in that phase of the matter could work together and secure authorization for a census of some character to be taken annually. The Department of Labor is interested in the taking of an industrial census along with the Department of Mines and Minerals, the Department of Public Health, and to some extent the Department of Public Welfare.

This department particularly needs to know the ratios existing between those actually employed in the various industries and those incapacitated through illness, accident and death. All matters of compensation should—for comparative purposes—be connected with and based upon the number of workers in the particular business or trade being studied. If 2,000 workers are employed in a given trade and ten are injured in a given month and in the corresponding month the following year 100 are injured, what chance is there for comparison if it is not known whether 2,000 or 50,000 were employed?

Aside from the difficulty of getting adequate statistical legislation, there is the difficulty of formulating a system which will procure the required information with comparatively little trouble. The history of the various systems of labor statistics now in operation in the various departments of the State seems usually to be about as follows:

With the enactment of a law authorizing a division, commission, board or department the matter of statistics—unless specifically authorized was usually taken care of in a routine manner. In some cases great detail was employed; in others only various figures were compiled. As the various boards, commissions and departments were made over into divisions by the Civil Administrative Code the statistical practices inherited by a division usually had little to commend it. Being so

firmly intrenched, however, those practices are, for the most part continued until today.

Attention is called to this condition, that it may be corrected some time in the future.

THE REHABILITATION ACT.

Under the law commonly known as the Rehabilitation Act, the Director of Labor is given certain powers having to do with the re-employment of former service men. These powers are in the main, given in section 2 of the law, as follows:

§ 2. The Director of Labor is hereby authorized and directed to investigate the matter of reemployment of soldiers and sailors honorably discharged from the military or naval service of the United States, in order to bring about and to promote their speedy restoration to the industrial status formerly occupied by them. To that end he shall make use of all available information disclosed by records and statistics of his office, and he shall wherever and whenever possible and practicable advise with, and mediate between, employers and such discharged soldiers and sailors and he shall cooperate with patriotic organizations in efforts to bring about a prompt rehabilitation in industry of such discharged soldiers and sailors; he shall from time to time make such recommendations to employers as shall be deemed fit and reasonable in order to advance and promote such replacements in industry as shall be most advantageous to soldiers and sailors discharged from the naval or military service of the United States.

As many requests are received in the course of administration of the law, the following have been made, for the information and guidance of those reporting:

RULING NO. 1.

DUPLICATE LETTER AND FORMS RECEIVED BY FIRM.

Where a duplicate request and blanks are received by a firm after having turned in a report, as of November 15, or thereabouts, there is no necessity for sending in a second blank.

In the preparation of the list of Illinois employers of labor it is probable that a small per cent of duplication may occur.

Where a report suitably filled out has been deposited in the mail, the firm receiving a duplicate request will understand that such duplication comes from error in the list and act accordingly.

RULING NO. 7.

DATE OF RETURN.

Careful reading of section 1 will show that the Director of Labor is given the power to call for a report under the Rehabilitation Act at such date as he may determine necessary. Particularly where work is seasonal in character, as in the case of canning industries, shall the report be asked for in season.

RULING NO. 6.

WHO ARE EMPLOYERS OF LABOR?

The Rehabilitation Act, section 1, says "that every employer of labor," shall file a statement.

The term "employer of labor," is a broad one and includes employers of workers of all kinds. "Office help" is held to be "labor," under the law.

RULING NO. 5.

COMPANIES ORGANIZED AFTER NOVEMBER 12, 1918.

The Rehabilitation Act states in section 1, "that every employer of labor employing five or more employees," so giving no exception to firms or corporations organized after November 12, 1918.

A part of the law makes necessary that the number of workers be listed according to the schedule given on the report blank.

Therefore, firms organized after the close of the period of war are required under the law to report and can answer Question No. 7 with, "None, Company or Corporation not organized at that time."

RULING NO. 4.

CORPORATIONS, AS RAILROADS, HAVING BRANCHES OR DIVISIONS.

Where a corporation has branches or divisions throughout the State, it is optional with the company whether an individual report is filed for each division or whether the same information is given on a single report, in total.

Where a railway is superintended from a point in Illinois it is evident that the intent of the law is that workers hired in Illinois shall be reported. Workers hired outside of Illinois, as engineers, conductors and the like, and making runs from division points outside of Illinois into Illinois need not be included. In case it is necessary to include them, the one making out the report will so state.

RULING NO. 3.

MEANING OF REQUEST, "STATE NUMBER OF SUCH EMPLOYEES RE-EMPLOYED BY YOU."

The intent of the Rehabilitation Act seems plain as regards employees leaving their employment and being re-employed.

Question 7 asks for "Number of employees who left your employment to enter naval or military service of the United States between April 25, 1917, and November 12, 1918."

This section of the law cannot be made plainer by comment. If carefully read it can mean but one thing. No matter when the report is made, Question No. 7 refers to employees leaving employment between the dates given.

Question 8 also, if carefully read, can mean but one thing, the "Number of such former employees who have been re-employed up to the date on which this report is sent." This includes the total number beginning with the first service employee re-employed at any time and ending with the last service employee re-employed up to the time of making out this report.

RULING NO. 2.

WHERE A COMPANY GOES INTO LIQUIDATION.

Bankruptcy, either voluntary or involuntary or termination of a firm or corporation by any means prior to November 15, 1920, makes it necessary for such firm to fill out and file with the Department of Labor statement under the Rehabilitation Act, as reports for the year 1920 are as of November 15, or later.

RULING NO. 8.

"LESS THAN FIVE PERSONS EMPLOYED."

The Rehabilitation Act plainly states "that it applies to every employer of labor, employing five or more employees * * *."

By implication an employer of labor employing from one to four people is not required to report.

Where an employer avails himself of the service of the members of his family or other immediate relatives and gives or allows them in return any valuable consideration, they may be considered employees under this act, and if five or more in number shall be required to report.

RULING NO. 9.

EMPLOYMENT OF WOMEN ONLY.

Where a firm or corporation employs women only, report shall be made the same as if men were employed. The law specifically states, "every employer of labor, employing five or more employees * * * shall * * * file * * * a statement." The law does not restrict the filing of this report to those employing male labor, but by statement specifically says, "employees," without designating their sex.

Employers of female labor only, therefore are required to report under the law.

RULING NO. 10.

REQUEST FOR INFORMATION.

Section 3 of the Rehabilitation Act says in part, "in no case shall the statistics be so arranged or information so used as to reveal the affairs of any single employer. Where a firm or its duly accredited legal or business representative wishes a duplicate of a previous report, this, if on file, will be forwarded as an act of courtesy, though not required under the law. Where an attorney or business representative of a firm requests such information it will be necessary to file with the Department of Labor a statement properly certified to, showing that such representation is actual and legal, and that the one making such request is authorized to make it by the firm originally making the report.

RULING NO. 11.

FOREIGN CORPORATIONS.

Foreign corporations, manufacturing or otherwise, conducting their business outside of the State, are not required to report any business operations outside of the State but only to list employees, if five or more, actually domiciled within the State or having their headquarters there.

RULING NO. 12.

ACKNOWLEDGMENT OF REPORT.

Ordinarily, no acknowledgment is made of reports properly filled out and deposited in the mail and received by the Department of Labor.

In special cases where a request is made, acknowledgment will be sent in due course.

RULING NO. 13.

CERTIFYING TO INFORMATION ON BLANK.

Where certain conditions obtain in which it is apparent that a company does not need to report but wishes to have certain information filed with the Department of Labor, a notation on the Rehabilitation form may be made if desired so that the form may be duly filed, preventing request another year for information.

RULING NO. 14.

There is no provision under the law by which the Director of Labor is authorized to waive or exempt any firm employing five or more workers from reporting. The law specifically states that "every employer shall file a blank."

RULING NO. 15.

SHUT-DOWNS.

Where a plant is shut down or working part time with less than 25 per cent of its regular number of workers, date the form back to the last normal run and give information as of that time.

The following tabulation shows the essential facts concerning firms reporting in 1921:

EMPLOYERS' REPORT UNDER THE REHABILITATION ACT (1921).

	Number of firms.	Number of employees.	Number of employees over 16 years.		Number of employees under 16 years.		Number of employees leaving for service.		Number of employees re-employed.	
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Towns outside of Chicago with five or more employees	4,410	281,164	228,023	50,843	1,624	674	27,440	24	17,187	5
Towns outside of Chicago with less than five employees.....	418	1,281	947	321	13	-----	150	----	140	----
Total number of firms reporting outside of Chicago.....	4,828	282,445	228,970	51,164	1,637	674	27,590	24	17,327	5
Chicago firms with five or more employees.....	9,287	872,910	646,057	215,298	6,313	5,242	75,797	98	50,882	54
Chicago firms with less than five employees.....	783	2,353	1,824	508	15	6	208	----	192	----
Total number of firms reporting in Chicago.....	10,070	875,263	647,881	215,806	6,328	5,248	76,005	98	51,074	54
Number of firms out of business in Illinois.....	125	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total number of firms reporting in Illinois.....	15,019	1,157,708	876,851	266,970	7,965	5,922	103,595	122	68,401	59
Firms outside of State doing business in Illinois.....	88	34,391	32,376	2,001	14	-----	2,523	----	1,871	----
Grand total.....	15,107	1,192,099	909,227	268,971	7,979	5,922	106,118	122	70,272	59

DIVISION OF STATE SUPERINTENDENT OF FREE EMPLOYMENT OFFICES.

W. C. LEWMAN, *State Superintendent.*

Now that the Civil Administrative Code has been in operation for four years, a term usually considered a unit in administrative affairs, this is a good time to note how the code has worked out with reference to centralized supervision of the free employment offices. This report, therefore, deals to some extent with events of the past four years, as well as conditions of merely the last fiscal year.

MODIFICATION OF TITLE.

With the advent of the Civil Administrative Code and the consequent separation of the "free" offices and the "pay" (or licensed) offices from supervision of the old Bureau of Labor Statistics, the superintendence of all free employment offices was placed in the hands of a code officer, appointed by the Governor, this officer being designated under the code as Superintendent of Free Employment Offices. The Superintendent of the Chicago Free Employment Offices, a civil service employee, through the authority of the code, was given the title, General Superintendent. Noting that the similarity of these two titles might lead to confusion, upon the recommendation of a committee on uniformity acting for the directors of the various departments, it was recommended that the code officer, having jurisdiction over all offices in the State, should be identified by prefixing the word "State" to the code title. Acting upon this recommendation, division and superintendent, as noted above, are designated "Division of State Superintendent of Free Employment Offices," and "Superintendent of Free Employment Offices," respectively. Owing to this ruling, there has been little or no confusion on account of the similarity of the terms, other than the fact that early in 1917 the Civil Service Commission planned to hold an examination for the code office, having mistaken it for an office under that commission's jurisdiction.

DUTIES.

The duties of the State Superintendent of Free Employment Offices indicated in general by the code, were more specifically defined by the Director of the department and by a committee appointed by the directors for that purpose, soon after the code became operative.

In general, the State Superintendent is required to see that the interests of all concerned in employment matters are amply protected. The parties to such interests are the public—which only realizes the vast importance of regular employment when it is interrupted; the worker—who must have regular employment in order to live and maintain his home and family; and the employment offices—which offer means by which not only the worker who is out of work can secure employment, but offer an opportunity for the worker to advance himself to a better position as his abilities warrant.

From these general interests—those of the public, the worker, and the means of supplying the worker with a job—it has been possible, under the legal sanction granted by the code, to make the duties of the State Superintendent specifically helpful, so as to make for both surety of employment and advancement of those employed.

(1) GENERAL SUPERINTENDENCE.

The first duty of the State Superintendent is, as the title implies, the superintendence of the various free employment offices of the State. With the beginning of the present form of organization, July 1, 1917, there were six free employment offices, the country offices operating at Rockford, Rock Island-Moline, Peoria, East St. Louis and Springfield. At that time, the Chicago office also maintained branch offices, the better to make placements in localities more remote from the loop.

At the date of this report, June 30, 1921, in addition to the offices named above, the following offices have been established: Aurora, Bloomington, Decatur, Danville, Joliet, Chicago Colored.

A glance at the accompanying chart, "Establishment of Free Employment Offices," will show the number and status of all free employment offices now being conducted in the State.

Superintendence of these offices, in great part because of the high character and ability of those performing the work, has been greatly simplified. When a local superintendent is not only willing but anxious to cooperate and has a thorough knowledge of local conditions, this is a great aid to the State Superintendent, who is able to get all offices working according to a single, definite, unified plan.

A definite effort has been made to get the good-will and complete cooperation of the employer, in each locality. It is to be remembered that it was through the insistence of the labor interests that the first free employment office was established, and for many years it was currently supposed by many employers that such offices were mainly for the benefit of the worker. Indeed, it seems that the employer gave little attention—previous to the last six or eight years—to the employment situation. He simply was carrying out an undefined policy of neglect. He was not "sold" on the free employment offices—even if he knew of their existence. The average employer, with prospective workers making applica-

tion for employment, is quite justified in having his ideas on how to procure help, more or less firmly fixed. In the past, particularly, it may have taken a great deal to bring him around to the point of view where he would admit that a "politically-managed employment office," as he might term it, could fill a real need.

One of the superintendents of one of the older State employment offices, has, at the suggestion of the State Superintendent, made a thorough study of the attitude of the local employer of labor in the country town. This study has brought out some interesting information. First, is that the system of having an employment manager for a firm and have that officer do the hiring, is only slowly making its way from the cities to the country. Second, outside of the city—where the employers have been familiar with the advantages of securing help through employment offices (both free offices and pay agencies), that employers—unless previously instructed—are not generally familiar with the advantages to be derived from dealing with the free employment office in their locality.

In many cases, the employer of labor may have a hazy idea that the State Free Employment Offices are merely for the purpose of supplying common labor, such as workers on railways, streets, highways and filling other jobs where strength is the main qualification. There is some excuse for certain employers holding to this view. The beginning of the movement for free employment offices was based on the "unemployment idea." The offices were authorized by law that unemployment might be reduced. Now, it is a well-known fact that first impressions remain. Quite a stir was made when, some twenty years ago, the free employment idea began to crystallize. The impression then created has persisted to a marked degree—that the offices are merely to deal with unemployment.

Unemployment naturally, first and most commonly is to be met in the ranks of common labor. Not only is common labor migratory in character, but the common laborer is the first to feel the pinch of coming hard times. In the best of times the common laborer moves from place to place because he is pretty sure of a job wherever he goes. Liking travel, and finding the local free employment office an easy means of changing his case, he has but to strike a town where there is a free employment office and he is pretty sure to be provided for. When work is slack, the migratory worker heads for a free employment office as soon as he strikes a locality having one, as it is a place where he is sure of decent treatment and information concerning the probability of employment.

So it is that the free employment office is not only a barometer indicating the presence or absence of industrial storms, but because of its life-saving qualities for the transient worker, it may lead the unthinking employer of labor into the hasty conclusion that the State free employ-

ment offices are of value only to the employer *when he needs common labor*.

Realizing this condition after my first visit to the field in 1917, and noting the necessity of educating the employer of labor, I was careful to impress upon each superintendent the need of getting in close touch with the employer. For the employer, basically and in all events, is not only the key to the employment situation but he is the one who must be looked to in part to insure the continuance and extension of the employment service throughout the State and the United States. If the employer is satisfied and pleased with the work done by the free employment offices, this satisfaction will be reflected in his attitude toward legislation favorable toward them, as well as in helping—through his cooperation—to make them practical and a benefit to the workers and the community. It has been said that while great credit to labor must be given in demanding the establishment of free employment offices, that a great deal of their worth and value to the worker must come through the employer being a continuous and satisfied patron.

In several cases, I found that the superintendent of an office from the start had not only made a thorough canvass of employers by telephone, but in many cases had made calls upon the employers in his territory, with as much care and thoroughness as though he were a salesman selling the trade. Not only did these salesmanship methods help directly in letting the employer know what kind of service he could expect, but such calls were of great benefit to the superintendent. It is good placement practice wherever possible, to be able to visualize the job to which an applicant is to be sent. Where a business has provided attractive surroundings and has gone to considerable expense to make the worker even more comfortable than the present health, safety and comfort laws require, such business has earned the right to have the highest grade available workers sent to its employment manager. Where a business has made little effort to make working conditions pleasant and agreeable, such a business should be borne in mind as being of that grade and the worker given a chance at the better grade employment wherever possible.

PROPOSED COOPERATION WITH THE DIVISION OF FACTORY INSPECTION.

The foregoing observation leads to a suggestion which it is possible may be worked out during the next few years, i. e., closer cooperation between the free employment offices and the Division of Factory Inspection. That division employs some thirty inspectors who are in close touch with the various industries of the State. Not only do the inspectors, as individuals accumulate a great deal of valuable information concerning Illinois industries, but the mass information so secured and tabulated must be of great value to the free employment offices. How to utilize this information to best advantage can best be determined, it

would seem, by making this the subject of a joint meeting at which methods of cooperation might be discussed and arranged for.

One method of cooperation was used to a limited extent during the war when the same free employment offices distributed literature for one of the divisions, and also, with the enactment of a searching law calling for the inspection of mattress and bedding factories, the free employment offices were able to give information in some cases which proved of aid in securing immediate results.

That there may be a basis of discussion along paying lines, there have been listed below various points which might be considered and acted upon at a joint meeting such as suggested above.

(1) *Mutual Distribution of Literature.*

Since the establishment of the Civil Administrative Code and the consolidation and centralization of the various boards, commissions, etc., there have been a great number of plans discussed having to do with distribution of literature. Inspectors, calling upon a large number of firms in the course of a month and having, because of the authority granted them by the law, power to command attention, seem to be logically, the distributors of literature for the department, or for any of the other divisions.

Up to the time of the issuance of this report, little systematic work of this kind has been done. During the four years last past, there has been little or no funds available for the preparation of printed matter for distribution. While it is a fact that there should be some advertising matter put out by the free employment offices, yet the finance department—during the first three and one-half years of its existence resolutely opposed any expenditures for advertising purposes. Prior to that time blotters and some other forms of small advertising had been used, but no systematic method of advertising has—up to the time this report is issued—been employed.

Under the guidance of a skilled advertising writer, a number of booklets might well be prepared, giving the scope and functions of the free employment office system as it is now being exercised in Illinois. A small pamphlet would suffice and from the success of this pamphlet could be determined what future material of a similar class might be issued.

Once a pamphlet or other matter of a similar character is prepared, it would add little to the work of any inspector to assist in the distribution of these pamphlets. In return for this distribution the various free employment offices could aid materially in the enforcement of factory inspection laws, by keeping a supply of literature on hand and by acting as general informant, where necessary, prior to the call of an inspector.

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(2) Exchange of Information.

The Division of Factory Inspection through its continuous inspections—made as these are from year to year—accumulates a great deal of statistical information. Without doubt, this information, suitably arranged and correlated would be of value in extending the business of the free employment offices. Where the required information is not immediately available, it could, it is probable, be supplied by a simple modification of information procured or tabulated.

In return for information so supplied by the Division of Factory Inspection, it would be possible to report the opening of new businesses—which would call for inspections—or the existence of conditions in older established firms, which might call for immediate inspection.

(3) General Benefits.

In general, it would seem that the work of all inspection divisions would benefit from the help that can be given by the free employment offices and it is a certainty that the offices could benefit greatly from information and cooperation given by the Division of Factory Inspection.

EDUCATION OF THE WOMAN EMPLOYER.

Considerable space has been devoted just ahead in advancing the principle that the employer needs education as to how the free employment offices can benefit him. Such argument assumes that the employer is of the male persuasion. In a majority of cases this is so, but there are an increasing number of female employers and, what has always been of importance in making short time placements, women employ transient workers to a considerable degree.

Seasonal work, spading gardens, beating rugs, helping with housecleaning, firing furnaces and employment of like character often is contracted for by the "lady of the house." Once she learns that she can secure dependable workers merely by calling up on the 'phone, a permanent patron for the employment office has been made. Not only has a patron been created, but it is more than probable that the small sum spent by the housewife on labor has been of substantial help to the transient worker who benefits financially by the transaction.

In many of the offices a woman clientage has been built up, which—once it has found that dependable help can be furnished—becomes permanent. When particularly good transient help is available, it has been found the best of policies to do active solicitation over the 'phone to place the worker. The patron is invariably pleased at being remembered and the effect upon the worker is of the best as he realizes that an effort is being made to see that he is placed.

STATISTICS.

The statistical value of such records as have been completed by the various free employment offices has suffered from the fact that there has been no practical, workable census of employers and employed, available. This fact has been touched upon in previous reports, but it cannot be too often emphasized that statistics without a basis of comparison are of comparatively little worth.

If it is known, for instance, that there is a definite number of carpenters in the State and the report is made that sixty thousand are out of work, the degree of unemployment may be determined to a degree that makes the resulting deductions of value to builders, workers, arbitrators and the public at large. Information such as this calls for, makes necessary an accurate industrial census. Were the machinery for such a census in operation, it would be possible to provide statistical information to anyone applying for it, suited to the particular needs of the one making the application.

SEASONAL INDUSTRIES.

One of the most important of the seasonal industries is the canning industry. In connection with the canning industries two problems arise. The first is a matter of State policy, the second a matter of State law.

Regarding the proper policy of the State there has been some question and debate as to the stand that should be taken in shipping workers out of the State. Across the border are a number of canning factories which—with the advent of a "big crop" may find their needs for labor most pressing. It has been the policy to supply the needs of out-of-the-State employers, where these needs do not conflict with the needs of the employers in the State. By putting the necessities of State employers—taxed as they are to support the State institutions—ahead of all outside interests, this makes a principle which not only seems to be basically right, but one which has worked out to the satisfaction of all concerned.

It is also not to be forgotten that the worker has, under the act creating the free employment offices, his right to employment, if the office has it listed. He further would seem to have the right to choose from among available opportunities open the one which—because of its location, working conditions or wages paid or the like—he prefers.

Fortunately, through care exercised in protecting the rights of all concerned, it has been possible to safeguard the interests of both employer and employed in connection with placements with seasonal industries, both within and without the State.

A second matter calling for a ruling from the department at times has to do with the employment of female labor during the canning season. There seems to be no good reason why the usual exemptions made in connection with canning factories in certain other states should not be enacted into law in this State. Those in favor of such enactment give the following reasons:

The canning of farm and garden products calls for the greatest possible haste when fruit or vegetables are waiting. Any delay causes immediate depreciation of the product. A hot night, as an instance, may cause ten to one hundred times the loss that would be represented by overtime wages of women who are at hand and willing to work an additional five to ten hours in order to preserve the fruit. Under the present limitation of women's work hours to ten in any one day this is not legally possible. The human factor also enters into the problem of seasonal labor. In canning factories, as an instance, there is generally a strong inclination on the part of all workers to make as much money during the short working season as possible. For some workers this is the only time of the year when they "work out." Nearby workers use the canning season as a time for getting the year's pocket-money. Others come out from the city for a change of work and scene and want to take back as much money with them as possible. Those following seasonal work regularly usually want to work as long hours as possible.

Under the circumstances set forth just ahead, therefore, it might be reasonably inferred that, when any legislation for amending the present Women's Ten Hour Law is being considered, a provision exempting the seasonal industries usually exempted in certain other states would be welcomed by the free employment offices as well as by the seasonal industries and the workers themselves.

WHAT IS UNEMPLOYMENT?

It has been stated above that the early conception of the function of the Illinois free employment offices was that of reducing unemployment. As the extent and importance of the work done by the free employment offices increases from year to year and as the offices are looked to actually to reduce unemployment below the normal it is now a good time, it would seem, to determine what is "normal" unemployment.

Here again we come sharply against the need of an industrial census in the State. Were it possible to know accurately the number engaged in the various trades and industries, the degree of unemployment might be calculated so that the figures so obtained would be of great value. When Hornell Hart made his studies of unemployment in the United States from 1902 to 1907, placing the unemployment figures at 2,500,000 or not quite 10 per cent of the "active supply," he was obliged to base his estimates on a population of approximately ten years ago. This means of course that there is probably a basic inaccuracy which makes the deductions merely on the basis of an estimate.

Once the total number of workers can be computed it will be possible to put into effect some plan for determining the percentage of unemployment in Illinois among the workers of the State. Situated as Chicago, East St. Louis, Rock Island and Rockford are, within easy access of the workers from other states, and noting the influx of workers

from outside of Illinois, it is to be seen that our percentage of unemployment may be brought up by the influx of idle from other states. In record-keeping to determine the percentage of unemployment in the State, it would be a simple matter to classify workers as to residence. Those who were actual residents of the State for a year or more might be included in one class while those under one year might constitute another class. Still another classification might be made, it is possible, by keeping track of those applications from "new-comers," those who had lately—as within 30, 60 or 90 days, come to the State in search of a job.

In further extension of this idea it has been proposed that some form of report might be required of employers, in which they give the number of workers employed, together with any increase or decrease, when such increase or decrease amounts to 10 per cent or more of the working force. Such a report would furnish a fairly exact barometer of employment—and unemployment—throughout the entire State. Such information accurately tabulated, would give an index to employment which would be of value to all.

REDUCTION OF TURNOVER.

One of the many problems which confront the employment agency manager is that of turnover. By "turnover" is meant the degree of change which is made by a firm in replacing any employees with others.

This definition may need some study, as it limits turnover strictly to replacements of working employees and is calculated by comparing the number of replacements with the total number employed. For instance, if a firm employs one hundred workers and ten of these are replaced in a given month by ten workers doing substantially the same kind of work, there is obviously a turnover of 10 per cent of the total. This computation, however, may be unfair. The ten jobs on which the computation is based may be extremely difficult to hold or be underpaid, or both. In such case, the 10 per cent turnover may take place in one department of the business, there being no turnover at all in the remaining departments.

This is merely one of the phases of inaccuracy which may result from computing turnover on the entire number of workers which is probably the most common method of computation.

It may be possible, as statistical methods improve or some system is introduced in the practice of statistics, to compute turnover by departments in the various businesses of the State. Merely turnover computed on the departmental divisions as now made in the various businesses will show plainly where the greatest turnover occurs. A standard once established, it would be comparatively easy for any business to note any rise in turnover, have the cause investigated and, the cause being removed, the high rate would be automatically adjusted.

Aside from the statistical value of figures on turnover, the subject is of great importance to the free employment office manager. He deals largely with the class of workers who are participants in the highest rate of turnover. Common labor particularly not only is placed more often but is turned more often than the other grades of labor.

It has been the policy of this division in conforming to the general policy of the department, to aid in keeping labor turnover from costing either the worker or the employer. When workers of high grade in times of work which normally does not call for shifts are participants to a considerable degree in labor turnover, the cost must be met by the business and probably is in entirety or in great part. It costs money to "break in a new man," and it would seem to be a reasonable presumption that the worker must pay for his own training.

It may be and often is argued that the free employment offices should seek out the competent worker and help him to advance. Whatever the theoretical or pedagogical value of this view may be, it remains a fact that the free employment offices are kept busy *placing those who apply* and *those applied for*.

In the first case there is no cause to add to turnover; in the second case, it normally is always possible to supply the employer from among those who have applications on file.

Free employment office superintendents often hear the argument that where the superintendent knows of cases where a worker might be greatly benefitted by being transferred to another position it would be the thing to do to take the responsibility for making the change. Except in extraordinary cases this has been avoided.

It is a simple matter for a worker who wishes a better position to keep his application on file and to keep in close touch with the superintendent, advising him as to what improvement he is making in his work or what change he has in mind as a possible advancement, even though there were no increase in wages or salary. Such contact shows enterprise and identifies a worker as one who if not shifted, will shift himself, so that it works no hardship on the employer to place the worker when a favorable opportunity offers.

It is to be remembered that the functions of the free employment offices and the licensed employment offices are quite different in scope. The agency operating under a license from the State is in business to make money for its owners or stockholders. The greater the turnover in positions the greater the profits.

In other words, the licensed employment agency is vitally interested in turnover, for the greater the turnover the greater the profits. With the free employment office there is no need for cultivating turnover for the good record of the free employment office depends as much upon non-interference with the worker or the business with which he is employed as it does upon a large volume of placements. True, activity is com-

monly measured in terms of placements but it is becoming pretty thoroughly realized that "the free employment office does not live by placements alone." It is one of the functions of the free employment office to aid in maintaining stability in industry and this is done by what the collegians are fond of calling a "let alone policy." Whether this policy is one to be recommended seems to hinge considerable on the interests affected, and is frequently discussed from the point of view of the one affected.

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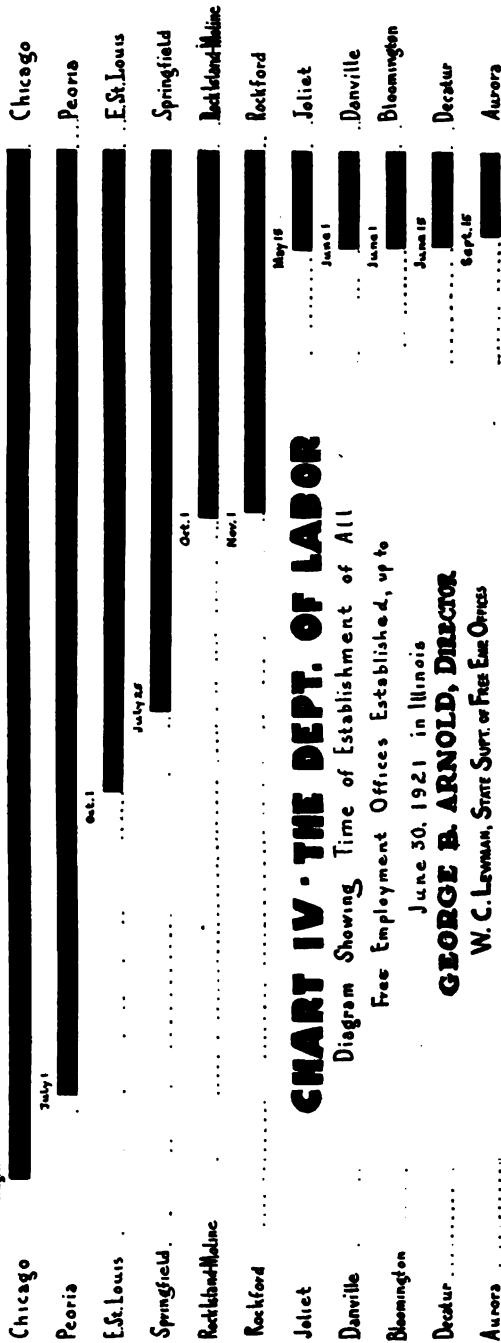


CHART IV - THE DEPT. OF LABOR

Diagram Showing Time of Establishment of All

Free Employment Offices Established, up to

June 30, 1921 in Illinois

GEORGE B. ARNOLD, DIRECTOR

W. C. LEWMAN, STATE SURT. OF FREE EMP. OFFICES

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DIVISION OF CHICAGO FREE EMPLOYMENT OFFICES.

CHARLES J. BOYD, *General Superintendent.*

In taking a retrospection of the activities of the Chicago offices of the Illinois Free Employment Service during the last fiscal year, we feel that much has been accomplished and that the good will of others who were engaged in an effort to meet the unusual industrial situation has been firmly established.

There is no gainsaying that this period has been a trying one for all, when it is realized that from a condition where there were only 98 persons applying for each 100 jobs, which was the condition in August, 1920, we reached a time where there were 329 persons registered for each 100 opportunities for work in the Chicago offices. This occurred in January, 1921, and from then on a slight improvement began to take place and continued until June, 1921, at which time a slight slump began to occur. At the end of the month the record showed that there were 309 persons registered for each 100 jobs available.

The following tables show the activities of the three Chicago offices for the fiscal year beginning July 1, 1920, and ending June 30, 1921. The number of persons registered, the number of help wanted, the number referred to positions and the number actually placed, together with the number of persons registered, both sexes, for each 100 opportunities for employment is given.

There is also included a table showing the number of persons registered in the 20 main classifications and the number of opportunities for work, the number referred and placed in each of these classifications.

While matching the jobless man with the manless job without cost to either is the function for which the Illinois Free Employment Service was created, there are a great many other things to be done in connection with this service in order that the most successful results may be accomplished. Especially was this true during the period when there was an average of over two persons applying for every job. This condition called for extra efforts and the energies of the service were directed along the line of helping to create public sentiment whereby some relief work might be started, odd jobs provided, and public improvements speeded up. Much time and energy was expended on this phase of the situation and uniformly good results followed.

NUMBER OF REGISTRATIONS, HELP WANTED, REFERRED AND REPORTED PLACED AT THE CHICAGO OFFICES OF THE ILLINOIS FREE EMPLOYMENT SERVICE FOR THE FISCAL YEAR JULY, 1920-JUNE, 1921, AND THE NUMBER OF WORKERS REGISTERED FOR EACH 100 PLACES OPEN.

Months.	Registrations.			Help wanted.			Referred.			Reported placed.			Number of persons registered for each 100 places open.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
July, 1920.....	17,845	2,165	20,010	16,364	2,581	18,945	15,983	2,080	18,063	14,450	1,614	16,064	110	84	194
August.....	12,918	2,302	15,220	12,514	2,947	15,461	11,478	2,234	13,712	10,290	1,698	11,988	103	78	181
September.....	11,523	2,597	14,120	10,115	3,121	13,236	10,175	2,659	12,834	9,194	2,042	11,236	114	83	197
October.....	10,279	2,266	12,545	8,723	2,691	11,414	8,787	2,329	11,116	8,030	1,732	9,762	118	84	202
November.....	8,500	2,191	10,691	4,641	2,050	6,691	4,798	1,935	6,733	3,980	1,440	5,420	183	107	290
December.....	10,179	1,977	12,156	3,176	2,000	5,176	3,347	1,733	5,080	2,747	1,278	4,025	320	99	419
January, 1921.....	13,534	2,595	16,129	2,719	2,181	4,900	2,969	1,918	4,887	2,305	1,348	3,653	498	119	617
February.....	10,481	2,072	12,553	2,282	1,662	3,944	2,363	1,480	3,843	1,716	1,081	2,797	459	126	585
March.....	11,464	2,280	13,744	2,647	2,343	4,990	3,112	1,805	4,917	1,968	1,328	3,296	433	97	530
April.....	10,339	2,256	12,595	3,639	2,097	5,736	3,748	1,812	5,560	2,827	1,337	4,164	304	108	412
May.....	12,544	2,349	14,893	2,623	2,169	4,792	2,848	1,717	4,565	2,122	1,327	3,449	304	108	412
June.....	12,544	2,685	15,229	2,661	2,257	4,918	2,837	1,925	4,763	2,031	1,403	3,434	471	119	590
Total.....	140,683	27,735	168,418	72,104	28,099	100,203	72,445	23,628	96,073	61,670	17,629	79,299	-----	-----	-----

NUMBER OF WORKERS SEEKING POSITIONS BY INDUSTRIES, WORKERS CALLED FOR, REFERRED TO POSITIONS AND REPORTED PLACED AT THE CHICAGO OFFICES OF THE ILLINOIS FREE EMPLOYMENT SERVICE FOR THE FISCAL YEAR, JULY, 1920-JUNE, 1921.

Industries.	Registrations.			Help wanted.			Referred.			Reported placed.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Agriculture.....	7,787	-----	7,787	2,879	-----	2,879	1,884	-----	1,884	1,358	-----	1,358
Boys.....	9,104	-----	9,104	5,047	-----	5,047	5,354	-----	5,354	3,615	-----	3,615
Building and construction.....	10,531	-----	10,531	3,184	-----	3,184	2,889	-----	2,889	2,059	-----	2,059
Chemicals, paints, oils.....	7	-----	7	5	-----	5	6	-----	6	4	-----	4
Clerical.....	6,856	5,573	12,429	3,299	4,141	7,440	4,528	3,897	8,425	2,139	1,588	3,727
Clothing, textiles.....	69	-----	69	23	-----	23	28	-----	28	14	-----	14
Domestic and personal service, hotel and restaurant.....	7,969	10,659	18,628	3,841	13,639	17,480	3,564	9,434	12,998	2,827	6,625	9,452
Food, beverages, tobacco.....	67	-----	67	50	-----	50	35	-----	35	19	-----	19
Factory work.....	-----	3,707	3,707	-----	2,561	2,561	-----	2,470	2,470	-----	1,897	1,897
Leather workers.....	15	-----	15	-----	-----	-----	-----	-----	-----	-----	-----	-----
Metals and machinery.....	19,786	-----	19,786	5,903	-----	5,903	5,655	-----	5,655	3,806	-----	3,806
Printing trades.....	301	-----	301	121	-----	121	97	-----	97	50	-----	50
Professional, technical.....	569	-----	569	193	-----	193	261	-----	261	95	-----	95
Theatres, amusements.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Transportation and public utilities.....	2,324	-----	2,324	429	-----	429	474	-----	474	357	-----	357
Wholesale and trade.....	3,020	-----	3,020	1,431	-----	1,431	1,771	-----	1,771	1,543	-----	1,543
Woodworking and furniture.....	2,524	-----	2,524	407	-----	407	399	-----	399	234	-----	234
Miscellaneous.....	16,348	-----	16,348	6,272	-----	6,272	7,186	-----	7,186	5,963	-----	5,963
Common labor.....	39,771	-----	39,771	25,674	-----	25,674	25,105	-----	25,105	24,499	-----	24,499
Casual workers.....	13,635	7,796	21,431	13,346	7,758	21,104	13,209	7,827	21,036	13,088	7,519	20,607
Total.....	140,683	27,735	168,418	72,104	28,099	100,203	72,445	23,628	96,073	61,67	17,629	79,299

While large numbers of persons were involuntarily idle, yet it is surprising what an amount of unemployment is due to the failure of demand for labor and the supply to connect up, and through constant agitation many additional jobs were created which helped to relieve the unemployment situation materially.

It is an economic measure to see that labor is kept as fully employed as possible, and also to see that capital is kept from remaining idle. This is best accomplished by keeping the wheels of industry revolving, if it is at all possible to do so. Thus more wealth is created and happiness and plenty among the masses results.

Public machinery for connecting the worker with the job is absolutely necessary at all times, and in Illinois this has been developed to a very high degree in the Illinois Free Employment Service.

Depressions like that which we are now going through have invariably followed wars and periods of high production and employment. However, it is generally agreed that this situation has about run its course, and that the peak of unemployment has been reached and we are now at a point in our journey toward normalcy where we can see the open road ahead. Much unemployment and some distress resulted from this depression, but methods of relief could have been provided if a program of public improvement had been mapped out in time for the inevitable, and far enough in advance so that it would have taken care of a large percentage of the persons who were idle on account of this general industrial depression. "Procrastination is the thief of time." This truism seems to have applied in the present instance, but we should not have waited until the problem of securing jobs for the jobless developed into the acute state to which unemployment finally led.

To the credit of all we have weathered this storm fairly well, and, speaking primarily for the Chicago offices of the Illinois Free Employment Service, their record will show that they have given a good account of themselves, and I am quite sure that this applies to all of the offices of the Illinois Free Employment Service.

In connection with the detailed activities which are tabulated by months and industries for the period under review, it will be noted that the general business depression was not so keenly felt in the women's department as in the men's. There was a shortage of domestic registrations in this division which was, no doubt, occasioned by the employment of girls in factories, restaurants and hotels during the war, who, having enjoyed the regular hours of these occupations, were reluctant to give them up and return to domestic work.

The registering of applicants and placing them in positions satisfactory to themselves constitute the main function of an employment office. In an office of this kind, however, dealing with all classes of people, a great deal of consideration has been given to welfare work, which in most cases renders invaluable assistance by helping to place

the applicant to the best advantage. By reason of our close cooperation in the various divisions in the office we have been enabled to accomplish excellent results along this line. As illustrative of this, we will cite the case of a young woman who had been earning from \$25 to \$30 per week, and had lost her position. She came into our office for employment, and through tactful questioning and by showing a personal and human interest in the applicant, her complete story was obtained. Briefly, it was this: She was the main support of deaf and dumb parents, both the father and younger brother being out of work. The clerical and handicap divisions were requested to give special consideration to this case, and as a result we were successful in placing all three of these in profitable positions within a period of three days.

Another case was that of a man who had lived in Chicago for eight years, coming here from Springfield, Massachusetts, to take charge of a department in the branch of an eastern motorcycle concern. Relief had not been asked, but the case had been brought to the attention of the Visiting Nurses' Association through a communication from the East asking them to investigate the circumstances of this family. As a result, the superintendent of this organization requested us to make a special case of this if possible, as he had made an investigation which showed that the man was "fearfully up against it." He had been out of work for many months, and during that time he had appendicitis, and two of his four children were ill with diphtheria. His wife was also ill with a complication of diseases, and the constant drain upon their savings, which were quite considerable as they had been very thrifty people, left them without means to supply the necessities of life. Coupled with this, they had been served with an eviction notice and the only thing which saved them from being immediately dispossessed of their home was the statement of the doctor that the wife would probably die if they were moved. However, within two weeks the family was evicted and this left them in a dazed condition. They were evidently people who had always lived modestly and comfortably on their own savings, and their condition, so far as could be learned, was no fault of their own, and, while they did not ask for assistance, it was difficult to understand how they had been feeding the little children, the eldest of which was ten, or in what manner the wife secured the necessary care.

As soon as the case was reported to us, we began to cast about in an effort to find a position for this man wherebv he would be given not only new courage, but a chance to make a livelihood for himself and family.

There was no question that this was an unusual case, for it was disclosed that there was a possibility of the home being broken up on account of the eviction. In fact, a temporary separation did occur and the children were placed in a home while the wife was sent to a hospital for treatment, where later she regained her health. In the meantime,

our efforts to secure employment for the husband had been fruitful and we were successful in placing him in a good paying position which enabled him to get back on his feet. As a result, the family was reunited, and, with a revival of business, the firm in the East where he was formerly employed prevailed upon him to return to them and assume his old position. The latest report in relation to this case was to the effect that he was steadily employed and that the family was again living in comfortable circumstances.

We might cite innumerable instances as proof of how a kind word, a little encouragement and a human interest in an applicant has often remedied a serious situation.

Of special interest to agriculturalists is the division specializing in agricultural help which cooperates with the State farm advisors. Chicago is a large distributing point for this kind of help, and we have directed men not only to places in Illinois, but have had calls from and supplied many farmers in the states of Indiana, Iowa, Michigan and Wisconsin, and during the harvest season directed a considerable number of skilled harvest hands to the wheat fields of Kansas, Nebraska and the Dakotas.

One of the interesting divisions of our service is that specializing in the placement of physically handicapped persons, the activities of which have become favorably known among such welfare organizations as the Service League for the Handicapped, the Chicago League for Hard of Hearing, Social Service Department of the Cook County Hospital, Visiting Nurses' Association, Bureau of Social Service, Chicago Lying-In Hospital, Legal Aid Bureau, and the Boys' Brotherhood Republic. These organizations, previous to the creation of this division in our office, were frequently called upon to give financial aid to this class of applicants, who, on account of their handicap were unable to secure employment. The work of a division of this kind is particularly complex in ordinary times, but in crises of unemployment where there is a large surplus of ablebodied and physically fit men competing for jobs, the situation calls for unusual effort on the part of the service. In our effort to render the maximum of service, we were "put to the test and found not wanting."

The return of the ex-service man to peaceful industry, is another phase of the employment situation to which special consideration is given, and this service works in the closest cooperation with such organizations as the American Legion, World's War Veterans, Buck Privates, Veterans of Foreign Wars, and others interested in the soldier problem.

Shortly after the termination of the World War, this problem became manifest and it grew in proportion with unemployment. There are thousands of ex-service men still seeking employment.

Our experience and close touch with the situation has been of much value in helping to build up our organization to handle this phase of the situation, and although the competition for jobs during the year was very great, our records will show that we have been able to place thousands of ex-service men in lucrative positions. This was accomplished in many cases through the exchange of both applicants and opportunities with the recognized soldier organizations and of direct efforts through our placement divisions.

DIVISION OF EAST ST. LOUIS FREE EMPLOYMENT OFFICE.

ROY E. STACER, *Superintendent.*

The year 1920-1921 was a lean year for the free employment service as far as positions were concerned. The column for "applications from employers," which for months had been crowded, became almost a blank space early in the year and for months remained that way. The columns for "registrations" for the unemployed became so full that a solution of the situation seemed impossible.

Under instructions from the Department of Labor first attention was given former service men. The pathos of the position of the boys who had worn the khaki caused a number of employers to favor them, but not to a sufficient extent to provide an appreciable number of them with work. This was not because the employers were inconsiderate, but because work did not exist. Our doors were open to the recruiting officers of both the army and navy, and many young men unable to find work reinlisted.

Realizing that little could be done by looking for positions where there were none, this office turned its attention to the various relief agencies of the city and established an active cooperation with them. The Salvation Army has a men's hotel in our city where a large number of men are housed nightly. Often orders for handymen come at an hour of the day when our regular applicants, discouraged, have gone to their homes. Orders like that must be filled quickly or they are seldom repeated. By explaining our position to the clerk of the Salvation Army hotel, we are able to call for men who will take short jobs and have them at our office in a short time. So much do the Salvation Army workers appreciate our cooperation that they return the courtesy by turning over to us places they are unable to fill.

We have a like connection with the United Charities. The president sends men who are heads of families to us, and we place them at the head of our list. We also aid by trying out men who say they cannot find work and who apply to the Charities for aid. Several times we have exposed men who were subsisting on charity when they were unwilling to work. In many other cases, however, the men were willing to work and held the positions found for them.

The Queen's Daughters have learned to depend upon us in doubtful cases. With the support of the police department we have been able to rid our city of a number of undesirables.

Two concrete cases may serve to illustrate much of the work done by us. The president of the Queen's Daughters reported two cases of extreme need. One was a man with a family, who said that he had searched everywhere for work. We promised him the first job turned in. We kept our word. In order to do so it was necessary for a member of our staff to walk to the man's home. It was almost noon but the man was not up. He asked many questions about wages, decided to take the place, but did not do so. Relief given to him and his family was cut off.

Another family, where a boy of fifteen was the only support, was reported to us. We not only found him a job, but we helped him secure his working certificate. He is now working. We do not favor the issuance of certificates except in extreme cases. This we considered such.

The Supervisor of the Poor, Louis Ross, feels greatly indebted to our office. His office, which had been crowded for days by men who said they had no work, was cleaned as if with a broom, when we reported to him a large order for men received from a road construction company. The worth-while men came to our office and were given cards entitling them to jobs. The imposters were forced to leave town.

In our city the Visiting Nurse Association of St. Clair County has its headquarters. The visiting nurses find many worthy homes where there is want, because the heads have no work. In turn they often find homes where the men cannot go to work, because there is no one to leave in charge of the sick. We have helped them in both instances. Their office is across the street from ours. We have representation on their board. Our help is greatly appreciated.

As the foregoing will illustrate, much of the work done by us is not contained in the report which follows and which contains in tabulation form the record of our fiscal year:

1. Applications received from employers.....	10,033
2. Number of employees asked for.....	13,981
3. New registrations of employees.....	5,132
4. Renewals of applications.....	6,616
5. Persons referred to positions.....	11,451
6. Positions filled.....	10,582

FEMALE SECTION.

When work in the plants became scarce at the beginning of the year, many women who employ domestic labor thought that the end of their troubles had arrived. They thought that all that would be necessary would be to call women back from industry and that they would come. They thought wrong. For months applicants for work made the same demand, "Anything except housework."

Many of our applicants are Negro women and girls from the South, who are not accustomed to work as it is done in modern households. Their work in the past has been on plantations and many of them can-

not light a gas stove, let alone manage an electric washing machine. As a help to them we made arrangements with the Recreation Center of the Y. W. C. A., which is in charge of colored secretaries to teach classes in housekeeping, washing, ironing, with injections of health lessons, standards of work, etc. The East St. Louis Electric Light and Power Company cooperated by giving lessons in washing and ironing by electricity. The appearance of the women underwent a marked change. They became neater and happier. Certain industries from nearby towns ordered factory help from us, but the low wages offered and the high car fare necessary to reach the plants made it impossible for us to fill them.

Many of the women placed by this department are casuals. Our present hope is for a training school for domestic workers, in either our Y. W. C. A., or our National Catholic Community House. We can place trained domestic workers. We feel that gradually the work of women in the home is receiving the recognition that it should. Nothing can bring about the recognition quicker than a testimonial of training. Give a house worker a diploma and the first step towards placing her in the class with trained nurses will have been made.

FARM HELP.

Early in the year we established contact with the farm advisers of our own and surrounding counties. The results were good, especially in Madison County. Through the busy season we had calls daily from Edwardsville and placed many men in that county. We cooperated with the national bureau through the wheat cutting and harvesting periods. Men were glad of the bulletins we were able to post, because of directions from headquarters. Some farmers, like some housekeepers, figured that men would work for room and board because of the industrial depression. We ridiculed this idea, and in most cases were successful in placing men at good wages. The telephone connections with most of the farms in our vicinity helped our work greatly. Electric street car lines also aided in making it possible for us to rush men to "threshings" at short notice.

ROAD WORK.

Toward the latter part of the year we received a number of orders for men engaged in road construction. It is our belief that the State of Illinois should require contractors for State work to obtain their help through the State employment agencies. In this way many men would be protected from agencies who live and grow wealthy through supplying labor.

PUBLICITY.

The press, both of our own city and St. Louis, is always ready to publish employment office news. Valuable space is always ours. National, State and local reports are printed in full, as are features. If the em-

ployment office were permitted to advertise its needs once a week in the East St. Louis Daily Journal, the result would far exceed the cost.

As an evidence of the position held in the community by our office, we submit the action of Mayor M. M. Stephens in the present unemployment crisis. He decided that the Illinois Free Employment Office is adequate to handle the employment situation, and refused to appoint an employment committee.

DIVISION OF PEORIA FREE EMPLOYMENT OFFICE.

THOMAS METTS, *Superintendent.*

In setting forth the activities of the Peoria Division of Illinois Free Employment Offices for the period July 1, 1920, to June 30, 1921, we feel that we have handled a big problem to the entire satisfaction of ourselves and the public in general.

The world was passing through the troublesome period of readjustment and reaction that began with the close of the World War. An indication of the approaching business readjustment was given when New England shoe, woolen and cotton mills closed or went on part time, putting twenty thousand men out of work. Silk mills in other eastern cities took similar action. Big increases in rates were granted the railroads of the country to enable the roads to meet increased wages.

Altogether, industrial unrest which manifested itself during the period of reaction immediately following the war, became even more marked during the year 1920-21. Strikes were numerous but with few exceptions they were not of wide scope and did not seriously affect industrial conditions. Radical activities were involved in some of the labor disputes in the country, but not to a great extent.

Peoria, however, has something indeed to be proud of as the industrial unrest here was nothing compared to other cities of the same size. Situated in the heart of Illinois, in the corn belt district, it has extensive agricultural implement plants and due to sharp drops in the prices of wheat, corn and other farm products, the farmers retrenched and became very conservative in their buying, thereby affecting our local plants to such an extent that they were forced to shut down, consequently throwing many men out of employment. Men who really desired work adapted themselves to any kind of a job and were fairly successful in finding employment in other fields. However, statistics will show that registrations greatly exceeded the positions open and many applicants were a long time in finding work.

It was a big problem to get a man to accept and work for a lower wage than heretofore. Although food and clothing had declined to some little extent the worker still demanded war wages and until a time comes when men will accept a further cut conditions cannot be adjusted or bettered to any great extent.

Not much depression was noted by local building trades and at the present writing considerable building is going on and the majority of skilled tradesmen are employed. Rental property in Peoria is scarce

and with building material on the decline, in all probability in the spring of 1922 much building can be expected.

Heretofore our office has always experienced a shortage of farm hands and it was difficult to supply the many neighboring farmers who called on us for help. This year conditions have been reversed, we have had a surplus of really experienced hands and together with men who were laid off from factories and who would take farm labor work, during the 1920-21 season we had many more applicants than we had openings.

We must have publicity if we are to succeed in our endeavors to increase the efficiency and standard of the Peoria office and at this time it would not be inappropriate to express our gratitude to the Journal-Transcript of our city for publishing our reports monthly and for their cooperation in general. We also have the cooperation and good will of the Association of Commerce, the Associated Charities and in fact all the relief and welfare associations in general.

The Peoria office stands ready to help and is desirous to assist ex-service men in every possible way. The boys have not received the compensation due them and it is our endeavor to give them preference in the positions we are called upon to fill.

A high standard is being maintained in the female department. Formerly practically the only registrations received were from domestic help, day workers, laundresses, etc., while now we are receiving applications from stenographers, bookkeepers, office workers, nurses, seamstresses and various other skilled workers. The public, however, does not realize that we are in a position to supply skilled help. The general opinion is that we are a clearing house of unskilled labor only.

In conclusion we herewith set forth a table showing statistics covering the period from July 1, 1920 to June 30, 1921:

MALE DEPARTMENT.

Applications from employers.....	3,541
Persons asked for by employers.....	6,102
New registrations	4,442
Renewals	4,245
Persons referred to positions.....	4,789
Positions filled	4,643

FEMALE DEPARTMENT.

Applications from employers.....	4,511
Persons asked for by employers.....	4,562
New registrations	339
Renewals	4,282
Persons referred to positions.....	4,450
Positions filled	4,355

DIVISION OF ROCKFORD FREE EMPLOYMENT OFFICE.

PETER T. ANDERSON, *Superintendent.*

The activities of the year dating from July 1, 1920, up to and including June 30, 1921, can only be thoroughly understood by actual experience in the employment service. The conditions that existed in this office up to December 1, 1920, were entirely different from that date up to the time of this report. The demand for help, the first six months reached its peak, during the months of September and October when we had over 900 jobs listed that we could not fill. On December 1, 1920, the demand for help dropped down to 139 positions open that we could not fill. Our lowest level was reached January 12, 1921, when only 40 jobs were available, and this same condition was reached during the month of May, 1921. Our lowest placements was reached during the month of February, 1921, when only 637 positions were filled during the month mentioned.

The following tabulated statement will show you the variations from month to month during the period of depression, and during all of this time we had jobs open that we could not find people to fill, lack of experience and skill being the chief cause of rejection of applicants for these jobs:

TABULATED STATEMENT OF POSITIONS FILLED MONTHLY.

						Total.
July., 1920.	Male placements....	688	Female placements....	389		1,077
Aug., 1920.	Male placements....	704	Female placements....	419		1,123
Sept., 1920.	Male placements....	812	Female placements....	362		1,174
Oct., 1920.	Male placements....	811	Female placements....	428		1,239
Nov., 1920.	Male placements....	675	Female placements....	369		1,044
Dec., 1920.	Male placements....	418	Female placements....	285		713
Jan., 1921.	Male placements....	375	Female placements....	383		758
Feb., 1921.	Male placements....	316	Female placements....	321		637
Mar., 1921.	Male placements....	536	Female placements....	398		934
Apr., 1921.	Male placements....	445	Female placements....	395		840
May, 1921.	Male placements....	373	Female placements....	335		708
June, 1921.	Male placements....	416	Female placements....	375		791
		6,514		4,524		11,038

The following tabulated statement will show the average monthly shortage of help in certain positions open:

July, 1920.	Shortage of male and female help.....	687
Aug., 1920.	Shortage of male and female help.....	758
Sept., 1920.	Shortage of male and female help.....	920
Oct., 1920.	Shortage of male and female help.....	920
Nov., 1920.	Shortage of male and female help.....	218
Dec., 1920.	Shortage of male and female help.....	139
Jan., 1921.	Shortage of male and female help.....	77
Feb., 1921.	Shortage of male and female help.....	50
Mar., 1921.	Shortage of male and female help.....	79
Apr., 1921.	Shortage of male and female help.....	70
May, 1921.	Shortage of male and female help.....	92
June, 1921.	Shortage of male and female help.....	100

PLACEMENTS BY OCCUPATIONS.

MALE SECTION.	
Agricultural	1,589
Boys	33
Building construction	460
Clerical	214
Clothing and textile	8
Domestic and personal service	89
Foods—Beverages—Tobacco	25
Leather workers	3
Metal machinery	653
Printing trades	6
Professional—Technical	3
Transportation and Public Utilities	60
Wholesale and trade	12
Woodworkers and furniture	217
Miscellaneous	69
Common labor	2,139
Casual labor	934
	6,514
FEMALE SECTION.	
Clerical	196
Clothing and textile	5
Domestic personal service and hotels	1,086
Foods—Beverages—Tobacco	2
Metal and machinery	256
Transportation—Public Utilities	33
Casual work	2,946
	4,524
	6,514
	4,524
	11,038 Total for year 1920

INDUSTRIAL CONDITIONS.

The industrial conditions in this division and especially the last eight months covered in this report were what might be considered bad, but very few plants closed down. Quite a number reduced their force, some as low as 5 per cent of normal, and not many went over 60 per cent, yet with all this added surplus of labor during the winter months, not much hardship seemed to materialize. A great many plants made it their business to take care of their married help in preference to single. This act alone helped to a great extent.

Factories all over the division when called up, reported that they had a continuous stream of help applying for work. This was particularly true during the month of February, but March, April, May and June showed an increased volume of business.

To show the proper conditions in several industrial lines, this office was informed during the month of April that several shops and plants were begging for time in which to pay their taxes, and that they were keeping the factories running when they ought to be closed. This will give an idea of the industrial conditions of several plants during the months of March, April, and May, 1921.

LABOR CONDITIONS.

Labor conditions during the period of this report were good up to December 1, 1920, but before that time the matter of readjustment was in the air and one of the chief topics of conversation, and this was the

means of starting trouble among the laboring class; but notwithstanding all the talk about wages, etc., very little trouble seemed to develop. The question of cutting wages was not considered to be such a hardship as long as the price of commodities came down in proportion to the reduction in wage.

The building industry wage readjustment was put into effect by the Associated Building Contractors on or about April 1, when a flat reduction of 20 per cent was made on all trades and the option was the open shop, and at this time the situation stands the same, with the exception of the bricklayers and plasterers who made a voluntary reduction. All other lines of factory workers were reduced, and at the present time no trouble seems to develop.

EXPERIENCE GAINED THROUGH ADVERSE INDUSTRIAL CONDITIONS.

The experience gained by the help in this office through the trying period of industrial depression lasting from December 1, 1920, to June 30, 1921, was of inestimable value.

Help had to be placed with more care because of the number applying, the opportunity was greater for a better selection, return card and verification by phone was almost a 100 per cent placement, and this was true of the female department more so than the male. Our method used was a more thorough understanding with the employers of help, in defining the duties to be performed by the help wanted. The rest of the work was up to this office to get the men or women to fit the jobs. The help applying was more severely questioned than heretofore, and if the applicants did not fit the job, it was not the fault of the help in this office, as the burden of proof was put squarely upon the shoulders of the applicants. The line of questions propounded was the means of turning a great many applicants down, but the reward was in more placements and better placements. Those who could not answer the questions were simply told in a kindly way that they could not fill the bill, and it is needless to say that our efforts along this line met the approval of the employers.

Placements of large numbers is not so important as well placed help, help that sticks on the job. The satisfied help does not cause the employer trouble. The men or women who are placed and work for months and sometimes years on the job are in demand in preference to the help that move around a few days here and a few days there—in other words, Nomads of the community in which they live.

INFORMATION GIVEN OUT.

This office is at the present time considered by almost all important interests in this community as the source of information on labor conditions and industrial data. We endeavor to supply all that call with the most authentic information that we are able to give from up-to-date reports, from observation and conclusion arrived at by thorough, con-

stant study of all lines of industry and news articles published for the public benefit. The many angles of questions asked present problems hard to solve, but by a little thought and study, we usually bring order out of chaos.

COOPERATION.

Cooperation between the general office and the local offices is a matter of vital importance to the employment service, and I am pleased to state we have the most hearty support it is possible to receive from this source and this same spirit instilled by the general office should be carried out to the fullest extent from the local office to all other employment offices and to all organizations in each division in order that the true spirit of cooperation for the public welfare and the employment service may be carried into effect. It is only by such efforts that we may expect to get results.

PUBLICITY.

During the height of the depression, this office has sent out form letters to as many as 500 or 600 different firms and concerns in this division in an effort to stimulate business. We have done this from time to time as the industrial barometer went down and this was the means of adding quite a number of jobs to our roster. This was particularly true of the city of Rockford when the short job system was put into effect during the winter months of the present year. All local concerns took part in this program and the Rockford office was made the point of distribution of these jobs to those that were needy and in destitute circumstances. The local press took this matter up and gave the movement good support and wide publicity and a great deal of success of this effort is due to this agency. The interest taken by the press on all employment matters is highly commendable.

DIVISION OF ROCK ISLAND-MOLINE FREE EMPLOYMENT OFFICE.

FRED W. RINCK, *Superintendent.*

The fiscal year ending June 30, 1921, was a very quiet and uneventful year in the Rock Island-Moline office as compared with the previous four years. The lull following the unusual activities of the war period was marked.

During the year there were placed through this office 9,349 persons, and for the past four years from July 1, 1917, to July 1, 1921, 66,810, or an average placement of 16,704 per year.

The table presented below has been made up with a view of showing that we have succeeded in placing male applicants to positions above the grade of common labor and female applicants to positions outside of domestic service:

MALE.		
Laborers	3,288	
Factory and foundry hands.....	336	
Accountants, cashiers and clerks.....	58	
Auto mechanics and assemblers.....	42	
Blacksmiths, boilermakers and bolt makers.....	13	
Bricklayers, carpenters, painters, plumbers, electricians, steamfitters, etc.	153	
Drill, lathe and machine hands.....	100	
Draftsmen	32	
Farm, dairyhands, gardeners and harvest hands.....	903	
Harness and leather workers.....	6	
Hotel and restaurant workers.....	265	
Molders and coremakers.....	118	
Millwrights	3	
	5,217	
Others not classified.....	1,543	6,760
FEMALE.		
Cooks and domestic workers.....	440	
Cashiers	4	
Clerks	44	
Factory workers	79	
Bookkeepers	6	
Office workers.....	5	
Typists	13	
Stenographers	14	
Hotel and restaurant workers.....	782	
	1,390	
Others not classified.....	1,199	
Total male placements.....	6,760	
Total female placements.....	2,589	
Grand total—Male and female.....		9,349

Our records also show that during the period from July 1, 1920, to June 30, 1921, more than 1,300 individuals, firms and corporations were supplied with skilled and unskilled laborers from this office.

Our list of patrons includes most of the large firms and public service corporations in this territory. It is gratifying to note that many of the larger employers have sent us letters of recommendation, commending the values of the service.

REGISTRATIONS.

The office has made a special effort to secure a full and complete registration of all those applying for work. The name, residence, number, and telephone number of the applicant, if he or she had a telephone or if the applicant had no telephone, the telephone of a near neighbor or store is placed on the registration card. A notation is made on each registration card of the particular qualifications or skill of the applicant. These cards are filed alphabetically in order that they may be quickly reached whenever a call is made upon us for any kind of skilled or unskilled work. We have found that a careful classification and filing of these applications is very essential to the success in placing applicants in positions for which they are best suited.

FREE EMPLOYMENT OFFICE A NECESSITY TO THE COMMUNITY.

An employment office, if well organized and well conducted is a clearing house for labor in the community in which it is located. When it is efficiently conducted, the office is in direct and constant communication and close touch with every employer of labor in the community, whether factory or farm, shop or any other line of operation, that employs labor. A good understanding and perfect cooperation is essential. Too much stress cannot be laid upon this fact that there should be a good feeling between the office and every employer of labor, who should understand and feel that the office is giving them thorough and intelligent service. The men and women, seeking employment, should also have the greatest confidence in the management of the office that they are fairly treated, and that their case is thoroughly and intelligently handled.

When the condition prevails, the office becomes of inestimable value to the community and stands out in very great contrast to the operation of the private employment office, the first consideration of which is the profit of the individuals conducting the office, and there is little considerations for the welfare of those they serve.

CLASS OF APPLICANTS.

A casual observer of those found around a free employment office would at first glance be persuaded to believe that these men were of the floating class or as some said, a class of men who are looking for work and are not particular about finding it; but those who are making a

study, careful and analytical, of the applicants to the office for employment, can see a very different phase. A great majority of those who have applied to our office were honestly seeking employment, and a very great majority of those we have placed have gone to work in earnest expecting to give, and we believe giving full value for the money they receive as wages.

This office is giving careful consideration to several classes of men: First, those who are supporting families; second, ex-service men, who have been from a few months to several years in the service of the country—in the army and navy, and third, the young men, many of whom are seeking a trade or some position where they can begin work and gain promotion, as they become better acquainted and more efficient.

The office has found also the handling of those handicapped by physical or other infirmities a very delicate task. Some of them are handicapped mentally, some by reason of age, and many more by reason of some physical infirmity. This class requires a most considerate and careful treatment, and time and thought is required to place them where they may work to the best advantage.

WOMEN'S SECTION.

There are few factories located in this territory that employ any considerable number of female laborers as factory hands. The large manufacturing concerns during the war period substituted in some departments female labor for male labor, as in coremaking and in foundries and to some extent female labor was used for machine work: but when the extra war work was over, most of this kind of labor was relieved, so that we have had considerably less call the past year for female help for this kind of work.

There has also been very much less demand for female help for restaurant and hotel work. We attribute this mostly to the fact that there has been less change among laborers than there was during the war period, that is, that those who have work are more inclined to stick to their jobs and less inclined to switch from one job to another. We have had no difficulty in filling all orders for hotel and restaurant female help.

We have had more demand the past year for female help for domestic work. We have been able to supply nearly all that has been called for.

SOME OF OUR DUTIES.

One of the important duties of the employment office is to keep in constant touch in person and by telephone or mail with every employer in this division, especially with such as employ a large number of hands, and to be able to furnish them with competent help on short notice thereby not only saving the employer money, time and trouble, but also

saving the person looking for work many visits to the various factories and establishments where they might be able to secure employment.

Another item we do not overlook is the advertisement published in the daily press for help wanted and if the employer is not a patron of the office, we at once get into communication with him in order that we may know his wants and induce him to become a regular patron. We also realize that if we are to continue and be a successful public service enterprise, it must be on the merit basis only, that is, we must send the best person on each order to each employer.

ADVERTISING.

Hundreds of circular letters have been mailed during the year to employers in this district and bulletins are sent to the newspapers throughout this section telling just what this office has accomplished. The press has been very liberal in giving us good notices and no small part of our success is due to the publicity received in this manner. We appreciate the cooperation of the editors in the matter of publicity.

Every employer located in this district employing labor of every description from a high class mechanic to a dishwasher received the following letter:

"GENTLEMEN:

There are signs of improvement in factory operations, and it is our opinion that while there seems to be a plenty of factory laborers idle at present, that when the shops are all put in operation again, there will be a scarcity of skilled operators to supply the demand; even in the light demand that we have now, we find that there are not as many of that class of help available as we supposed.

The Rock Island-Moline Office of the Illinois Department of Labor, located at 1915 4th Avenue, Rock Island, Illinois, has registered, classified and indexed all of the skilled and unskilled labor for factory work, clerical, salesmen and women, hotel and restaurant workers, general construction and other work, that has applied to this office in this district. Your factory comes under our jurisdiction, and if there is anything in the line of labor that you need now or expect that you will need, between now and the first of the year, we shall be glad to hear from you, and will use every effort in our power to supply all your needs. We are particularly anxious to know of any anticipated improvement in factory operations in your shops.

This office is maintained by the State of Illinois and its services are free.

We shall be pleased to hear from you at any time.

Yours very truly,

(Signed) FRED W. RINCK, *Superintendent;*
Also Special Agent U. S. Employment Service."

Similar letters are dispatched as often as the required labor conditions warrant.

POSITIONS COUNTED AS FILLED.

It is the custom of the office to count as filled only those positions in which we have positive knowledge of the applicant obtaining employment. This practice has been adhered to consistently. The employers have been regular in returning our introductory cards, or we have received the information over the telephone.

PLACING OF SERVICE MEN.

The period of unemployment has brought its hardships to the service men and this division has made every effort in their behalf. When a soldier applicant presents himself at the office for work, all the means at our command is used to place him in a desirable position. Since the closing of the war, this office has placed 2,256 service men, many of them coming from other states and other sections of the Union.

FARM SERVICE.

One of the interesting departments is that of farm labor placement. This business has increased steadily from year to year, so that today we have calls and we supply the demand of farmers for help not only in Rock Island County, but in a score of other counties in this part of the State. The service extends also to a number of counties in the State of Iowa. When the harvest season is on in the great Northwest, the office has directed a large number of men for this work. Our policy has been to keep in close touch with every farm advisor in the different counties in which we have been supplying help and we learn from letters received from the farmers ordering help that they have been informed by their farm advisors to place their requirements for help with the Illinois Free Employment Office at Rock Island. In many cases the farm advisor has secured through us the help desired.

Our practice has also been to register every competent farm laborer who applied to the office for work, so that when the call comes from the farmers, we are prepared to serve them. During the year just closed we have placed 903 farm hands.

The letter following was mailed to farm advisors of the following counties: Rock Island, Mercer, Warren, Henderson, Hancock, McDonough, Adams, Fulton, Schuyler, Henry, Carroll, Knox, Bureau and Whiteside:

"DEAR SIR:

As the farming season is approaching, we wish to call your attention to this office and the service that we have rendered in the past and are glad to render in the future to the farmers in this section of the State in securing desirable farm help.

We supplied the past year over four hundred individual farmers with help. This office is maintained by the State and its services are absolutely free. We shall be pleased to cooperate with you in securing for the farmers help for their work.

Hoping to hear from you when in need of help or for any information in our line, we are,

Yours very truly,

(Signed) FRED W. RINCK,

FWR-BAS

Also Special Agent U. S. Employment Service."

WELFARE WORK.

At the time covered by our last annual report, our requirement record shows hundreds of men wanted in almost all lines of trades and occupations and the department had to go out in the highway and by-

ways and plead with an idle worker to accept a job. But the situation today is so much reversed that it is almost inconceivable. Men and women come to this office daily and beg for work in order that their families may receive necessities of life and among them are a number who refused good jobs at living wages when work was plentiful. In many cases in which there was immediate need and no work could be found, application has been made to some welfare organization or to the supervisor of the poor, for temporary relief and a concerted effort made to secure more permanent employment. In this manner the service has assisted in again bringing about a happy and self supporting household. At this time when there is so much distress and winter is at our door, the following letter was sent to all the philanthropic, commercial and fraternal organizations, county and city officials, newspaper editors, etc.:

"In these times of general unemployment, when so many are out of work, and there is so much want in the community, we believe that it is wise that all the organizations, both State and local, who are working to assist in relieving this want, should cooperate and work together for the general good.

The local office for the State Department of Labor, located at 1915 4th Avenue, desires to cooperate with you in every way. During the war period, as we well know, it was not a question of finding work for the men, but a question of finding men to do the work. At the present time, these conditions are exactly reversed. Now the problem with us is to find work for the large number who are applying to this office for employment.

We are in very close and daily touch with all the Manufacturing concerns and conditions of this district, and we keep a daily account of the labor requirements. So far as factory work is concerned at the present time, there is very little call, if any, at the present time, for this kind of help. There is an indication of improvement in building operations, but the general outlook for the winter is not very promising. The various road improvements being carried on, both in Illinois and Iowa is furnishing employment to a limited number. This work undoubtedly will cease when severe winter weather sets in.

By instructions from the State and the U. S. Department of Labor, our first consideration, when we have calls for laborers is to take care of the men in this locality, who have families to support. Mr. George B. Arnold, Director of the Department of Labor of the State of Illinois, has also particularly instructed us to give attention to the ex-service men, who have applied to us for employment, we keep their applications on file and our records show that we have placed more than two thousand ex-service men in employment.

It is our policy to give employment when we have it to residents of these cities, particularly to the cities of Rock Island-Moline and East Moline, giving particular attention to men and women who have families to support and who are in need of the work.

We shall be pleased to confer with you in matters regarding employment of the many who are in need of employment or on any other matter concerning the welfare of this community and shall be pleased to call upon you at any time or we will be very much pleased to have you call at our office. If you have any suggestions to make, we should be more than pleased to confer with you on any subject.

Yours very truly,

(Signed) FRED W. RINCK, *Superintendent;*
Also Special Agent U. S. Employment Service."

The response we have received from this letter has been very gratifying and show a willingness to cooperate.

One of the hardest problems that confronts our everyday activities is the boy who loses interest in his studies and discontinues school and takes the first job that is offered him. In a short time he finds out he does not like the work or is not paid a man's wage, as many a boy just past the age of 16 received during the war period, and he goes from one job to another without any promotion or financial increase. He invariably comes to this office seeking a job that he is inexperienced in. Our first thought is for the boys' future welfare. We realize that in this case we have a higher motive than simply filling places. The applicant is strongly urged to fit himself for a higher vocation by returning to school and finishing his studies or entering a manufacturing or mercantile establishment at a nominal wage as an apprentice until he masters the particular occupation he has a liking for and becomes an asset and an influence in the community. Often timely words in this direction set the boy to thinking and in many cases, our advice has landed the boy in the right track.

REASONS FOR THE PRESENT UNEMPLOYMENT.

This is one of the largest manufacturing centers of farm implements and machinery in the country. The large factories of this section particularly in the cities of Rock Island, Moline and East Moline. Davenport, Sterling, Kewanee, Rock Falls, etc., are engaged in the manufacture of articles that are sold principally to the farm trade, namely farm machinery, implements, etc. We have a few automobile concerns, a number of firms engaged in the manufacture of building material and supplies, and some gas engine manufacturers. The products of these factories are mostly marketed to the rural trade. As the farm business of the country is now experiencing a great slump owing to the depreciation in the price of farm produce, this farm trade has fallen off very greatly, and the factories find their warehouses filled with goods which they are unable to market, consequently most of our factories have been closed down until times will improve.

BUILDING CONSTRUCTION.

The building construction in this vicinity has been very much retarded the past year on account of labor wage, controversy between the labor union and master builders, and the high cost of material and transportation, which has not come down to pre-war price. The coming year, indication points to a marked improvement along this line. There is already under way and contracts let for early spring operations for several million dollars worth of buildings in Rock Island County and with the State hard roads being built throughout Illinois. Through the effort of Governor Len Small, this section receiving its share of this public improvement, will materially relieve the unemployment situation.

DIVISION OF SPRINGFIELD FREE EMPLOYMENT OFFICE.

LUTHER O. GERMAN, *Superintendent.*

There is no department in the State government that is closer to life, business and humanity than the Labor Department. Through its various divisions in the State it is constantly reflecting the trend of the times. The Springfield Free Employment Office, located in the heart of the coal and farming industry and suffering from the business depression, show the economic conditions that exist here.

INDUSTRIAL AND FARMING CONDITIONS.

From a hustling busy office endeavoring to secure employees to carry on the industrial life of the community, it has changed over night to a place where there is a constant demand for employment, with many of the industrial plants closed. Not only has the demand for help diminished in the city, but the farming communities have been forced to a retrenchment policy that has practically eliminated the call for farm help. There is just as much work to be done on the farm as usual, but owing to the falling market in grain, and the continued high price of farming materials and labor, both owners and tenants are doing work they formerly hired done.

COAL MINING.

The coal mining industry in one county alone in our jurisdiction, employs 10,000 men and is the chief industry of this section. Ever since the war the mines have been working full time, until the coming of spring, when a slacking up was noticed. This has continued until now approximately eight thousand men in this vocation are idle or working only one day a week.

A survey was made by this office a short time ago, and a mine located within the city limits gave the following data: Normal working force, 140 men; present working force, 12 men. Another mine just outside the city limits made the following report: Normal working force, 343 men; present working force, 15 men. Mines here employ from one hundred to seven hundred men and there was not a mine that had not curtailed its force.

INDUSTRIAL MANUFACTURING.

Other establishments also, are operating with decreased forces. In order to give some idea of conditions, a few of the industries in this locality were canvassed and the following table compiled:

Kind of industry.	Number canvassed.	Normal working force.		Present working force.	
		Men.	Women.	Men.	Women.
Lumber yards.....	2	173	7	132	6
Watch manufacturing.....	1	715	585	693	567
Canning factory.....	1	43	86	3	1
Contractor.....	1	50	15		
Boiler manufacturing.....	1	90	2	20	2
Plow manufacturing.....	1	400	9	50	6
Box manufacturing.....	1	16	15	12	12
Electrical manufacturing.....	1	665	435	550	400
Brick manufacturing.....	3	280		64	
Powder manufacturing.....	1	500	10	20	2
Total.....		2,932	1,164	1,544	996

This canvass shows about a 50 per cent reduction in the normal working force of the male employees, while the female employees registered about a 25 per cent reduction, making an approximate average of 35 per cent general reduction in the normal working force of the industries outside of coal mining. This naturally brings up the question, "Has the peak of unemployment been reached?" This division has given this question considerable study and the general opinion reached from information received to date is that the peak has not yet been reached.

SKILLED AND UNSKILLED WORKERS.

Skilled and unskilled workers have suffered alike in this depression and we find them divided into several classes when seeking a temporary vocation until work picks up in their own line. One class is composed of the worker who is proficient in his industry but is backward in seeking or attempting to tackle a different job. These men seldom make good in a new position because they lack initiative and confidence in themselves and are easily discouraged. On the other hand the other class of workmen are willing and eager to take any job and have that confidence and adaptability that generally assure them success in their new vocation.

There is still another class that haunts the employment office which needs constant watching and carefulness in placing. This class is composed of drifting humanity and the local laggards who seem to have lost all ambition and are satisfied barely to eke out an existence. This is the class that will jeopardize the employment service if great care is not exercised in placing them.

The following table shows the relative falling off of skilled and unskilled workers during the first and last six months of the year:

Skilled and unskilled workers referred to positions:	
July 1, 1920, to December 31, 1920.....	2,841
January 1, 1921, to June 30, 1921.....	1,789
Skilled and unskilled workers placed:	
July 1, 1920, to December 31, 1920.....	2,469
January 1, 1921, to June 30, 1921.....	1,595
Total placed during the year.....	4,064

This table shows that 61 per cent of the applicants were placed in the first six months while only 39 per cent were placed the last six months of the year.

A comparison for the years ending June 30, 1920, and June 30, 1921, shows that 5,891 were employed in 1920 to 4,064 in 1921, a decrease of 1,827 or 31 per cent.

RAILROAD WORK.

Railroad workers were hard hit in the recent curtailment order of the roads. One shop with approximately 130 skilled workers was reduced to 14 men. Besides this a number of trainmen were laid off together with clerks and maintenance of way employees. No definite information from a reliable source could be obtained when this class of work would be resumed.

BUILDING AND PUBLIC IMPROVEMENTS.

A little boom in the building trade was noticed this spring but it was in no sense near the program of building that was being contemplated in this vicinity. A strike in several of the trades slowed up some of this work but the general consensus of opinion was that building material and labor would be cheaper next spring, this being made an excuse for not building.

A big public improvement campaign which carried with it the repavement of streets, installation of an ornamental lighting system, laying of all wires underground and other minor improvements was delayed on account of a controversy between the city and a public utility concern. It is hoped this will be settled in the near future so that work can proceed.

Little or no hard road work has been done in this vicinity this spring because contracts let a year ago were completed and no new bids were advertised.

SOLDIER PLACEMENT.

One of the serious problems of the unemployment situation is the placement of ex-service men who are out of work. Many of the boys who returned are not fitted for heavy work and are forced to seek office employment. This condition is made serious by the fact that there are fewer office positions than any other class of work in the service and consequently it is only through personal solicitation of the employment officers that we are able to secure a few positions for the returned soldiers seeking this class of work. However, in other vocations we are more successful and the policy of this office is to take care of the ex-service man first, provided he is fitted for the position.

WOMEN'S SECTION.

Conditions in the women's section have undergone a big change since the last report was made. Then it was almost impossible to supply the demand for domestic help on account of the women seeking work in offices and factories, where the actual money paid was larger than for "household drudgery," as they called it. But now, on account of the business depression, office help is being laid off and factories are curtailing production to such an extent that their forces are being reduced about 25 per cent. Naturally this surplus of female help is reflected through this division and the following figures show the increase in applications this year over last year:

Number of new registrations and renewals:	
From July 1, 1919, to June 30, 1920.....	1,717
From July 1, 1920, to June 30, 1921.....	2,068
	<hr/>
Increase of registrations over 1919-20.....	351

This shows an increase of registrations of approximately 21 per cent.

Contrary to expectations wages for domestic and dayworkers have not been decreased by this surplus of help on the market, but a higher standard of proficiency is being demanded. Wages for domestic help still range from \$7.00 to \$14.00 per week, while dayworkers are receiving \$2.50 per day and carfare. This also generally includes the noon-day meal.

Dayworkers are by far more in demand than any other class in the women's department. This is caused by housewives arranging their work so as to have a dayworker two or three days a week in which the laundry and general cleaning is done, thus eliminating a full-time domestic servant.

FACTORY WORK.

Women are still retaining the positions they assumed in factories during the war and all indications are that they will be permanent. Of course the women are affected by the business depression as well as the men. There is an average of about 30 per cent of the female factory workers laid off and unless there is a change for the better in conditions, this percentage will be increased.

The year's activities for the women's department show that 2,246 positions were open; 2,068 applied for work; 1,869 were referred to positions and 1,444 positions were filled.

APPRECIATION.

This report would not be complete without a word of appreciation to the press and employers who have favored the division in many ways that have helped during the readjustment period. To the Illinois State Journal and the Illinois State Register our heartfelt appreciation is extended for their cooperation and willingness in giving us publicity in

a whole-hearted way. And to the employer, who during this dull period, has stretched a point to give work to a worthy applicant, upon a personal request from the employment officers, words cannot express our regards.

GENERAL SUMMARY.

The following is a general summary of the work of this office in both the male and female departments from July 1, 1920, to June 30, 1921:

Number of persons registering for work.....	7,300
Number of persons asked for by employers.....	5,760
Number of persons referred to positions.....	6,499
Number of positions filled.....	5,508

DIVISION OF BLOOMINGTON FREE EMPLOYMENT OFFICE.

JOHN E. MATTHEWS, *Superintendent.*

The fiscal year just closed has left unmistakable footprints of hard times on nearly every industry in our State. Particularly is this true since October, 1920. At this time the wave of business depression reached this city. Industries commenced to close down, some for inventory purposes, others for lack of orders. It took some time for the average worker to realize that his pay had stopped. It had been a regular habit to receive a pay check twice a month for two years, or from the time the armistice was signed. Prosperity reigned supreme, but a change appeared with telling effect upon every hand. Previous to this time, a shortage of nearly every kind of worker, mechanic or otherwise, was evident, but now a surplus was appearing at the office each day for employment of any kind. As winter was upon us we realized that our responsibility was to find work for these men. The cooperation of civic organization was solicited. The citizens in general were appealed to, through the local press, and every available means was used to meet the emergency. While we were not successful in securing work for all the unemployed, the service rendered valuable assistance and possibly accomplished as much as could be expected under the circumstances.

As spring approached we naturally expected that business would take on new life and things generally would become normal, but this was a mistaken idea. One of the factories that closed, at the time mentioned, remains closed at this date; other industries that commenced to operate did so with a force of from 35 to 75 per cent below normal. The men who had not been reinstated, up to this time, commenced to apply at the office for any kind of work regardless of the wage offered or the length of time the job would last. Every consideration was given to the man with a family, and the ex-service man. If these men were experienced in farm work they were given preference over other men with less responsibility. Many of them accepted and are still on the farms.

During the time that this report is to cover, the responsibilities of the division have been even greater than during the war. In the first case it was seeking the man or woman for the job. In the latter, seeking work for the unemployed. One could wait, the other must have work in order to provide for dependents. In some instances, if the father could not get work the mother or daughter would apply, and many were given employment in homes, laundries, hotels, restaurants, etc. Under

normal conditions it would have been almost impossible to fill these positions, either with married or single women, but it was a case of work either on one side of the family or the other. We have reported previously the difficulty we have encountered in filling positions such as named above, but during the past year this office has experienced little difficulty in meeting all requirements within a reasonable length of time.

One good feature that came out of the unemployment situation in the cities, was the back to the farm movement that it created. Previous to the spring of 1921, it was a hard problem to find enough good experienced farm hands to leave the cities and go to the farms. The few that did go would return as soon as an opportunity for work presented itself in the city. This created a hardship on the farmer and increased the work in the office. This spring there was a good surplus of men to select from, so we decided to direct only those men who preferred farm work to city work. The result was surprising. We kept a record of the renewals for nearly three months, and out of 545 directed, only 15 per cent had to be replaced.

Another surprising feature added to this is, that the wage paid this year was from 35 to 40 per cent less than last year. But it was a case of having a job that caused the men to stick. So the farmer profited by having steady help, if not in a financial way. This office is located in the heart of the corn belt. The demand for farm help is as great, or possibly greater, than any other office in the State with one possible exception, namely, the Chicago office. Our records show that during the past year the number of farm hands called for was 2,681. We referred 2,606 and placed 2,170. Possibly more of these men were placed, but no report was received. The service of this office extended into twelve counties during corn husking last fall. We make mention of this fact, to give some idea of the patronage this office receives from the farmers.

Bloomington is surrounded by as good a farming district as there is in the United States. Farm workers, both married and single, come to work in this district from the states of Ohio, Indiana, Tennessee, Kentucky and Missouri. This office is their headquarters, from which they are directed to positions without having to walk miles and sometimes days to locate a place of employment. The same is equally true with the farmer. He has learned by experience that the office force can direct as good, and in many instances better, help than he could locate himself, and also save him the time that would be used up in coming to the city to look for help and possibly having to return without securing it. We believe that the office force has saved more money for the farmer than the small tax he has to pay to help maintain the office. This will apply to the city employer in the same manner.

One of the best things that we can report, at this time, is that this city has not felt the shock caused by business depression as much as cities that are dependent upon factories, mills and other like industries.

Our chief resources are the agricultural district and the general repair shops of the C. & A. R. R. These two forces have continued to operate and must, out of necessity, keep on operating, although other sources close their gates against the worker.

The building industry in this city has been no exception to any other city. Very little new work has been erected, but the majority of building trades workers have been employed on repair work at least three-fifths of the time.

At this date all of our local industries, with two exceptions, are operating. The employers of this city are to be commended for the fair and impartial manner in the way work has been distributed. At no time during the past year has any employer reduced the force if a reduction in hours could meet the requirement. By using this method of curtailment expenses, each employee was given an equal share in the business at hand and the employer had his organization intact for future emergencies. This system also reduced the number of unemployed men and women that would naturally accumulate by a reduction in force.

This city has had few labor difficulties during the past year. Only four strikes have occurred and three were of short duration. At this date Bloomington has one small strike on, with seven men affected, occupation meat cutters. This office has never entered into any grievance that has arisen between employer and employee. We have exercised a fair attitude toward both sides, and by so doing have avoided any just criticism.

Very few idle men are to be found in this city, at this date, locally speaking. The majority of idle men belong to the building trades, and at the present time the outlook in the near future is good. Two large buildings, one for the Y. W. C. A., the other a gymnasium for the Illinois Wesleyan University are now under construction. Several other buildings to be erected for the University will follow soon, together with a soldiers memorial building. Future prospects for the building trades are very encouraging. The number of idle men in this city, caused by shut-downs or temporary reduction in forces, are 278 at this date. No doubt some of these men have found employment elsewhere, either of a permanent or temporary nature. All women have been reinstated to their former positions.

In conclusion, we wish to state, that when the Illinois Free Employment Service was established we believe it was taking a step forward. The general public, both employer and worker wonder why it was not established sooner. Both appreciate the privilege extended them by the Department of Labor, whereby each may apply, knowing that within a reasonable length of time his case will receive due consideration and the request granted, if possible. We are convinced that it is a paying proposition also, to the extent of 100 per cent, providing

the service is conducted in a sincere and honest manner to all parties concerned. If this kind of service is rendered by the office force, there is no doubt about its permanency. To abandon this service would be taking a step backward.

SUMMARY OF ACTIVITIES.

Classification.	Applica- tion from employer.	Number asked for by employer.	Number applying for work.	Number referred to positions.	Number of positions filled.
Male.....	3,433	4,805	6,354	4,538	3,855
Female.....	1,010	1,185	1,221	981	768
Grand total.....	4,443	5,990	7,575	5,519	4,623

DIVISION OF DECATUR FREE EMPLOYMENT OFFICE.

THOMAS A. MORAN, *Superintendent.*

This is the second year that the Decatur Free Employment Office has been in operation. It has taken some time to overcome the difficulties which are common to most new offices. At first there was a feeling among many employers and the general public as well that the office was simply a clearing house for floaters and unskilled labor, also that a fee was charged for service, but the range of activities of this office has entirely eliminated this feeling and the Free Employment Office is now generally considered a valuable and necessary service to the community.

Our motto is courtesy and an interest in the wants of both the employer and employee. The policy of this office is to give to everyone fair and impartial treatment and to inquire into the ability of the applicants in order that they may be placed in the positions for which they are best fitted. We have been very fortunate in placing high class clerical and skilled workers. In several instances good positions have been procured for responsible men, one a cost man for a large manufacturer, also an advertising man for a department store doing business throughout the State. We have also secured numerous positions for bookkeepers and stenographers in offices of manufacturers and business houses in this locality. We have been successful in placing many clerks, both men and women, in down town stores and with one dry goods store in particular this office has the credit of placing 25 clerks.

The demand for skilled workers was not as great as during the year ending June 30, 1920, but we have been very fortunate in placing a number of electricians, tool makers, blacksmiths and many other skilled workmen.

This office has been of great assistance to the farmers in securing help for them for the spring work, which was delayed by the weather. This is evident from the fact that the office has 787 more placements on the farm this year than during the year ending June 30, 1920.

The total number of men placed during the year ending June 30, 1921, show an increase of 871 over the previous year.

The women's department is constantly increasing its field of service and has been instrumental in placing girls and women in all classes of work. There was an increase of 334 over the number placed the previous year.

We have endeavored to place all returning service men whenever they come to this office looking for work. We try to give them preference so that they are not out of work very long until we find places for them.

That the Decatur Free Employment Office has been of service to the public is evident by the following letter received from C. A. Balkum, secretary of F. L. Suffern Co., Decatur, Illinois, which reads as follows:

Decatur Free Employment Office, Decatur, Illinois:

We wish to extend our thanks to you for your service in locating Miss Alice Wheeler who is now in our employ as stenographer.

Thanking you for this favor and assuring you that we will allow you first opportunity in placing any one else needed in our service in the future, we remain,

Yours truly,

F. L. SUFFERN CO.,

C. A. BALKUM, *Secretary.*

In a conversation with a manager of one of the department stores in Decatur, the superintendent of the Decatur office was told that when his store was in need of help, anyone who was recommended from this office would receive the position.

Credit is due this office in securing employment for people who are referred to it by charitable organizations. In many cases these persons have been placed in good positions and are very thankful for the assistance which has been given them.

The hard road which was started here in August and the two and one-half million dollars' worth of public improvement which is now going on in Decatur is affording employment to more than 1,000 men and has absorbed practically all of the common laborers in this locality.

Decatur has been comparatively free from labor troubles and the general industrial situation here is very satisfactory.

We at all times cooperate with the office of the overseer of the poor who refers to us persons who are asking help from the county. In many cases we have secured employment for these and by so doing we have saved the county money.

The press of this locality has always been ready and willing to publish anything that is for the betterment of this service and a word of appreciation is due the Decatur Herald and the Decatur Review for their cooperation. Both papers have been generous in the amount of publicity given to this office and have thereby been of great assistance.

The following is a report of the Decatur Free Employment Office for the fiscal year July 1, 1920, to June 30, 1921:

PLACEMENTS.

Classification.	Applica- tion from employers.	Number asked for, by employers.	Number applying for work.		Number referred to positions.	Number of positions filled.
			New regis- trations.	Renewals.		
Male.....	1,628	3,312	5,571	1,301	3,952	2,683
Female.....	1,391	1,564	1,734	689	1,396	1,026
Total.....	3,019	4,876	7,305	1,990	5,348	3,709

DIVISION OF DANVILLE FREE EMPLOYMENT OFFICE.

W. J. PAYNE, *Superintendent.*

MEN.

Applications for employment.....	1,927
Placements	1,268

WOMEN.

Applications	354
Placements	320

The above figures as compared with the same period of 1920, show a decrease of 678 in the placement of men and a decrease of 486 in the applications for work.

The cause of the decrease in placements is common knowledge, but the cause of decreased registration is accounted for by the office not accepting registrations from transients unless a job was immediately available, or from residents of other towns in the district unless they could be placed near their own neighborhood.

Placements of women show an increase of 19 during the year. Not much of an increase but it tends to show the steady growth of the Illinois Free Employment Service. Women were less affected by the unemployment slump. Women engaged in domestic service inform us that the places secured through this office are better than those secured from the pay office, and employers of domestic help say the grade of help is higher.

The value of the Free Employment Service to the city and community seems to be about equally divided between the employer and the employee and rests more on the qualifications of the applicant than upon the number of placements made. The fact that an employer can depend on the service to supply him in an emergency, and on short notice, with the kind of help needed at the time, has been a great factor in popularizing the service in this city and county.

A case in point. One of our large manufacturing concerns, having a rate case to submit to the Interstate Commerce Commission at Washington, was in need of an expert rate man. After calling all his business associates to see if they had a man that could do the work and failing, he called the Illinois Free Employment Office as a last resort. Within twenty minutes the employment office had placed him in communication with a man who carried the work through to a successful conclusion. The employment office knew where such a man could be found.

WHAT THE SERVICE CAN DO FOR YOUNG MEN.

A young man returned from the army in November, 1918. The place where he was formerly employed ceased with the war. In February, 1919, he was placed as a cost clerk at \$1,500 per annum. At this time he is purchasing agent for the same concern at \$2,500 and is a fixture with the concern.

A young man placed as a coal weigher in April, 1919, at \$20 a week, is now a foreman with the same company at \$35 a week with prospects of promotion.

A young man was placed as a local distributor for a food products company, starting at \$15 a week; after two years' service he is territorial manager at \$40 a week, with prospects for further promotion.

FITTING THE MAN TO THE JOB.

A married man with three children working in a factory could not make a living for his family on piece work even at war prices. He was too slow with his fingers. He was given a job on the farm where a house was furnished free of rent with the job. He was a good farmer and his employer made a statement at this office after two years' work that this man had his house well furnished, his children well dressed and in school, a cow of his own, had arised and had on hand meat and vegetables enough to last him a year, had 200 pure bred white Bramah hens worth at least \$300, and was carrying a \$2,000 life insurance policy. He stated that he was such a farmer that it was not necessary to give him much supervision.

The above are a few cases that are recalled and many more could be mentioned. Taking pains to fill orders promptly, with dependable men and women, and seeing that they have the qualifications for the work to be done, has without question built up a reputation and a respect for the Illinois Free Employment Service as a State institution of merit.

DIVISION OF JOLIET FREE EMPLOYMENT OFFICE.

L. ROGERS, *Superintendent.*

A review of the experiences and accomplishments of the Joliet Free Employment Office for the last year brings before us many unusual problems which had to be solved in the performance of our work. The first six months conditions were close to normal. The last six months has been a period of unemployment and depression.

Joliet is essentially a factory town. It is known as the "Mill City," and when the mills are down the town is down. The steel mills, the largest industry, is the gauge of prosperity in Joliet.

The transition from war time activities to reconstruction activities was slow, for wages had been high, and workmen, for the most part, had a bank account which tided them over the earlier period of industrial disturbances.

Beginning about September 1, and continuing to the present time, conditions grew from bad to worse. Nevertheless merchants seemed to be able to weather the storm, and although the weekly pay envelopes were thin, and in many cases had discontinued entirely, and storekeepers, as a consequence, found their shelves overstocked and the demand less than small, there were no failures in business here, with one exception, and that concern, an automobile agency, had been tottering for some time.

The stability of business, and the winning fight put up by the merchants in general, went far to keep conditions somewhat normal, and to keep the people less panicstricken and more hopeful.

About December 1 all industries here were obliged to lay off workers, and by the first of the year every industry in the city was working from 10 to 50 per cent below normal. While an effort was made to retain men with families and dependents, and to observe seniority rights, it was not long before the line of applicants seeking employment at our office included fathers of families, and self-supporting women, whose financial condition was the worst. During this period the employment office has done its share of relief work in finding employment for the needy. While the policy of sending the "right man to the right job" was strictly adhered to, thus maintaining the efficiency which is identified with the office, in every case the preference was given to the heads of families and returned soldiers and sailors. In many instances men and women, the heads of families, who were about to lose their homes, have secured employment through our office, enabling them to resume their payments and maintain their homes.

It is obvious that the greater number in the ranks of unemployed in this city are boys between the ages of seventeen and twenty-two years.

It is always difficult to find suitable employment for boys between the latter ages. Most of them consider wages rather than future advancement; therefore, when jobs became scarce, and employers sought to retain their men who had dependents, the condition among boys grew worse than ever before. A great many men were glad to accept a boy's work at a boy's pay. This threw many boys out of work. With much persuasion on our part, however, we have succeeded in placing a number of boys in the shipping department of two of our industries, where they are working up to good positions. Not long ago we placed a boy of poor parents in a department store where he will be given a chance to learn the business.

FARM HELP.

Joliet is completely surrounded by farm lands. From this territory, as well as from the entire county, come orders for help. We have also sent farm labor to Grundy, Kendall and Kankakee Counties. Although farmers were not able to offer attractive wages, we had no difficulty in supplying them with workers. In the last year we have received orders for 564 single and married farm hands. Five hundred and forty-eight were referred and 486 were reported placed.

BUILDING AND CONSTRUCTION.

During the last year there has been no activity whatever in the building industry. Here, like everywhere else, living is congested, owing to a lack of houses. This lack, of course, has been due to the failure of the contractors and building tradesmen coming to an agreement on wages, and the uncertain market on building commodities.

PLACEMENTS OF SOLDIERS AND SAILORS.

One of the chief functions of this office is and has been the handling of soldiers and sailors. We have endeavored since the first influx of returned army men to exert every effort possible to secure employment for them. Inasmuch as our report for 1919-1920, through some oversight, was omitted from the Annual Report of the Department of Labor, we wish to add that in the official report Joliet ranked fifth in cities of fifty thousand and under throughout the United States in placing her returned soldiers and sailors.

The following classified list shows the total placements in the men's division in the various lines of work:

Farm	486
Boys	20
Building and construction	19
Clerical	28
Woodworking	2
Metal and machinery	90
Transportation	45
Miscellaneous	39
Professional	1
Common labor	1,979
Total	2,709

WOMAN'S SECTION.

Not only do the men and their work offer interesting problems in Joliet, but the women, more than two thousand strong, keep two persons busy in the woman's section. The first of the year, when men were laid off everywhere, wives and mothers, who had never before sought employment, volunteered to become the wage earners to bridge the gap in the family income. The 14 factories in Joliet and vicinity, employing approximately fifteen hundred women, like those employing men, commenced to lay off help about the same time. Therefore, there were no opportunities for women seeking factory work. This gave relief to the domestic situation. We had many openings for domestics, restaurant, cafeteria and casual workers. Women had to work, and it was not long before the supply of domestic help exceeded the demand, for the first time in the history of our office. Hundreds of stenographers, book-keepers, clerks and general office workers were also laid off. To find employment for these women outside of their own particular lines of work was almost impossible. Very few were capable of doing domestic work. In July and August, during the vacation periods, we succeeded in placing about twenty-five office workers in temporary positions. At the present time there is a large number unemployed.

The belief, stronger among women than men, that the employment office was a harbor for "knights of the road" has passed into oblivion, and among the women applicants are those representing every strata of mental and physical ability. Employers too, have learned that the office sends out the most skilled as well as the commonest laborer, and every employer, without exception, has called upon our office for service and has received it.

A few days ago the superintendent of one of our industries called the woman's section over the 'phone and asked us to send them a good, strong, intelligent foreign woman for a particular job in the factory. The call was received about 2:15 p. m., and they wanted the help by 3 o'clock. We had on our waiting list a poor woman with six dependents, whose husband is in the State hospital at Kankakee, and whose home was only a short distance from this factory. She had no telephone by which she could be reached. Knowing that the family was a town charge, we called the supervisor, who immediately got in touch with the woman and at 3 o'clock she was on the job. The superintendent reported to us that she is just the kind of a woman he wanted.

The following is a complete list of the placements in the woman's section in the various lines of work for the fiscal year ending June 30:

Clerical	390
Factory	302
Hotel and restaurant	233
Domestic	549
Casual workers	641
Total	2,115

PUBLICITY.

The Joliet Employment Office obtains remarkable cooperation from the local press. Two daily newspapers in this city seem to place a very high estimate upon the civic benefits derived from this institution, and do everything possible in the way of publicity to stimulate interest in the office, and to encourage its use by everybody. It was largely by means of this newspaper publicity that the public became educated to the idea of the employment office. An employment office was something wholly new in this community, and through the excellent write-ups and stories, and particularly the detailed weekly and monthly reports of the activities of the office, people grew to know that the office was for the use of everybody, free of charge.

The Joliet office, therefore, owes a debt of gratitude to the Joliet newspapers for the excellent service which no other medium could possibly render so effectively and satisfactorily. A great measure of our future success will depend upon the continued relationship between our office and the newspapers.

The Illinois Free Employment Office in Joliet is now looked upon as an established institution in the city, and as a most important factor in industrial circles. The office cooperates with the American Red Cross, Associated Charities and county supervisor. Those seeking charity and town aid, if able to work, are brought to the employment office and taught to help themselves, thus alleviating their own wants, and also lessening the burdens on the coffers of charity.

Employers have learned that the employment office keeps a careful record of every applicant, and that when they call up for a good steady man to fill a certain place, the record on an applicant's card as to his ability and experience and the number of jobs he has had in the past year or two, is pretty good evidence as to whether or not he is the right man for the job. It is not unusual for an applicant to come into the office and tell us that the employment manager of a certain factory told him that he would have to secure a card from the Joliet Employment Office before applying there for work.

The following is a complete report of the total activities of this office for the fiscal year ending June 30, 1921:

	Orders from employers.	Number asked for.	Registra- tions.	Referred.	Placed.
Male.....	1,694	3,389	5,927	3,108	2,709
Female.....	1,018	2,492	2,951	2,642	2,115
Total.....	2,712	5,881	8,878	5,750	4,824

DIVISION OF CHIEF INSPECTOR OF PRIVATE EMPLOYMENT AGENCIES.

JOHN J. McKENNA, *Chief Inspector.*

In closing the fourth year of this division of the Department of Labor, supervising private employment agencies, the following table will show the activities of the office for the year July 1, 1920, to June 30, 1921.

The law that has been enacted for the regulation of private employment agencies has worked satisfactorily and has brought a wonderful change in the system of doing business between employment agencies and their applicants.

If there were a law compelling private employment agencies to furnish the Department of Labor with a statement showing the number of persons making application for positions during the month; the number of persons supplied with positions; the number of persons employed in the State of Illinois and the number sent out from the State of Illinois, etc., this would be good information for all parties interested in labor subjects. It would be an easy task for the agencies to comply with this.

Then there is the question that ought to be settled by the Department of Labor, as to when an applicant is liable to the agency for fees on the acceptance of a position from the agency. Without any rule at present we hold that the applicant is only liable when he physically takes hold of the position.

Another point is on the question of the practice of some of the agencies in taking judgment notes—having the applicants sign blank contracts and judgment notes before they physically take hold of the position.

With these few questions settled, the present law enacted for the purpose of regulating private employment agencies would be very satisfactory.

COMPLAINTS.

Total number of complaints, received against licensed agencies.....546

REFUNDS.

426	Full refunds, amounting to.....	\$3,370.10
34	1/2 Refunds, amounting to.....	1,064.10
6	1/4 Refunds, amounting to.....	174.70
1	4/5 Refunds, amounting to.....	12.00
31	3/5 Refunds, amounting to.....	132.90
1	40% Refunds, amounting to.....	53.48

THE DEPARTMENT OF LABOR.

2	1/3 Refunds, amounting to.....	3.00
5	Refunds, railroad fare.....	65.40
506		
22	Complaints had no claim.....	\$4,875.68
8	Complaints received other positions.....	
10	Cases pending.....	
546		
11	Complaints received refund railroad fare, also received refund of office fee, amounting to.....	35.73
	Total amount of refunds.....	\$4,911.41

GENERAL FEATURES.

	Number bi-monthly reports of inspectors.....	1,890
	Number daily reports of inspectors.....	14,064
	Number special reports of inspectors.....	57
	Number of licenses issued:	
	Chicago.....	294 at \$50 \$14,700.00
	Peoria.....	2 at 50 100.00
	Calro.....	2 at 25 50.00
	Danville.....	2 at 25 50.00
	Evanston.....	8 at 25 200.00
	Elgin.....	1 at 25 25.00
	Galesburg.....	1 at 25 25.00
	Glencoe.....	1 at 25 25.00
	Highland Park.....	2 at 25 50.00
	Lake Forest.....	1 at 25 25.00
	Maywood.....	1 at 25 25.00
	Oak Park.....	1 at 25 25.00
	Shelbyville.....	1 at 25 25.00
	Rock Island.....	1 at 25 25.00
	Winnetka.....	2 at 25 50.00
	Total amount of revenue.....	\$15,400.00

CLASSIFICATION.

	Labor agencies.....	56
	Clerical agencies.....	38
	Hotel and barber agencies.....	7
	Domestic agencies.....	50
	Nurses' registries.....	24
	Teachers' agencies.....	20
	General agencies.....	41
	Theatrical agencies.....	84
		320
	Amount of revenue.....	\$15,400.00
	Amount of expenditures.....	20,206.73
546	Complaints received and adjusted during the year.	
	Total amount of money refunded by employment agencies to complainants.....	\$ 4,911.41

CLASSIFICATION.

		Complaints against each.
	Labor agencies.....	190
	General agencies.....	234
	Clerical agencies.....	98
	Theatrical agencies.....	7
	Nurses' registries.....	1
	Domestic agencies.....	10
	Hotel and barber agencies.....	6
		546

DIVISION OF FACTORY INSPECTION.

JAMES A. SHORT, *Chief Inspector.*

The twenty-eighth annual report of the Chief Factory Inspector, and fourth under the Civil Administrative Code for the year ended June 30, 1921, presents a statement of the efforts of this division in enforcing the State statutes under its jurisdiction. Cooperation of employers of labor with the requirements of this department has been very satisfactory.

SUMMARY OF INSPECTIONS.

There were 137,701 inspections made by this division for the period July 1, 1920, to June 30, 1921. While minor details are not given, statistics are on file in this office giving full information of the results obtained by this division under the various laws.

SUMMARY OF INSPECTIONS—JULY 1, 1920, TO JUNE 30, 1921.

Laws enforced.	Inspections.	Totals.
Under the provisions of the—		
Child Labor Law, Chicago and Cook County.....	65,991	
Child Labor Law, State outside Cook County.....	23,922	
Child Labor Law, entire State.....		89,913
Women's Ten Hour Law, Chicago and Cook County.....	23,686	
Women's Ten Hour Law, State outside Cook County.....	11,415	
Women's Ten Hour Law, entire State.....		35,101
Structural Iron Law, entire State.....	518	518
Blower Law, entire State.....	966	966
Wash House Law, entire State.....	335	335
Bedding Law, entire State.....	1,302	1,302
Health, Safety and Comfort Law, Chicago and Cook County.....	7,619	
Health, Safety and Comfort Law, State outside Cook County.....	1,947	
Health, Safety and Comfort Law, entire State.....		9,566
Total for entire State.....	137,701	137,701

CHILD LABOR LAW.

The number of inspections made to enforce the provisions of the Child Labor Law in Chicago and Cook County were 65,991. The number of children employed being: Boys, 7,864; girls, 7,119, or a percentage of 1.6 to the total number of workers employed in the establishments visited.

In the State of Illinois, outside Chicago and Cook County 23,922 inspections were made. The number of children found working was 2,594 boys and 1,101 girls, or nearly 1.1 per cent to total of employees. In all, 2,062 violations were found by the deputy inspectors, but it was

only necessary to prosecute in 1,917 cases to secure compliance with the requirements of this department.

RESULTS OF INSPECTIONS UNDER THE CHILD LABOR LAW—JULY 1, 1920, TO JUNE 30, 1921.

	Number of inspections.	Total number of employees.	Males.	Females.	Boys.	Girls.	Violations.
Chicago and Cook County—							
Manufacturing.....	14,266	566,765	417,210	139,563	4,811	4,881	498
Stores.....	43,490	187,152	119,412	64,708	1,620	1,412	910
Offices.....	3,375	116,398	81,009	33,480	1,230	679	72
Hotels and restaurants.....	3,008	32,043	18,013	13,987	31	12	45
Laundries, dyers and cleaners.....	1,594	13,887	6,370	7,391	53	73	30
Amusements.....	234	4,938	3,737	1,067	92	42	335
Institutions.....	34	3,672	1,368	2,257	27	20	39
Total.....	65,991	924,855	647,119	282,753	7,864	7,119	1,829
State of Illinois outside Cook County—							
Manufacturing.....	3,658	214,921	180,262	32,494	1,478	687	28
Stores.....	16,311	81,171	52,131	27,894	837	309	159
Offices.....	1,459	14,955	8,398	6,339	199	19	—
Hotels and restaurants.....	1,637	9,988	4,754	5,158	40	36	33
Laundries, dyers and cleaners.....	662	4,684	1,991	2,612	38	43	—
Amusements.....	195	1,355	927	419	2	7	13
Total.....	23,922	327,074	248,463	74,916	2,564	1,101	233

WOMEN'S TEN HOUR LAW.

In Chicago and Cook County 23,686 inspections were made under the provisions of this law; and in towns and cities outside Chicago and Cook County 11,415 inspections were made. Although 1,584 violations were found it was only necessary to prosecute in 38 instances to enforce the requirements of this department.

RESULTS OF INSPECTIONS UNDER THE WOMEN'S TEN HOUR LAW—JULY 1, 1920, TO JUNE 30, 1921.

	Number of inspections.	Females over 16 years of age.	No time record.	Over ten hours.
Chicago and Cook County—				
Manufacturing.....	9,125	138,185	280	25
Stores.....	9,413	54,448	575	28
Offices.....	2,082	32,291	150	4
Hotels and restaurants.....	2,222	15,527	243	4
Laundries, dyers and cleaners.....	709	7,247	56	8
Amusements.....	110	1,003	15	—
Institutions.....	25	2,315	1	—
Total.....	23,686	251,016	1,320	69
State of Illinois outside Cook County—				
Manufacturing.....	2,354	31,316	36	—
Stores.....	6,624	26,695	113	—
Offices.....	626	6,285	8	—
Hotels and restaurants.....	1,281	4,975	31	—
Laundries, dyers and cleaners.....	342	2,605	4	—
Amusements.....	188	460	3	—
Total.....	11,415	72,336	195	—

THE STRUCTURAL LAW.

The number of jobs inspected in Chicago and Cook County under the provisions of this law was 284 and in the State of Illinois outside of Chicago and Cook County 10, a total for the entire State of 294 requiring 518 inspections. Corrective orders were issued in 11 cases, the safety of 37,655 employees being involved. The number of accidents reported was 8, of which 4 were fatal.

RESULTS OF INSPECTIONS UNDER THE STRUCTURAL LAW—JULY 1, 1920, TO JUNE 30, 1921.

Location.	Number of inspections.	Number of jobs.	Nature of work.							Employees.	Orders issued.	Accidents reported.		
			Erecting.	Repairing.	Altering.	Wrecking.	Cleaning.	Painting.	Excavating.			Total.	Fatal.	Non-fatal.
Chicago and Cook Co.	507	284	161	27	15	8	39	27	7	36,750	10	7	4	3
Decatur.....	2	2	2	—	—	—	—	—	—	70	1	—	—	—
Erie.....	1	1	1	—	—	—	—	—	—	360	—	—	—	—
Marseilles.....	3	3	3	—	—	—	—	—	—	218	—	—	—	—
Springfield.....	5	4	4	—	—	—	—	—	—	257	—	1	—	1
Total for entire State.....	518	294	171	27	15	8	39	27	7	37,655	11	8	4	4

THE BLOWER LAW.

The number of inspections in Chicago and Cook County was 925 and in the State of Illinois outside of Cook County 41. The number of wheels inspected was 8,105, of which 243 were found to be unprotected; in many cases this condition is due to the nature of the work being done, making the use of safety devices impractical. Two hundred and thirty-seven orders were issued as classified. The number of employees safeguarded was 8,105, of which 34 were female.

Nearly the whole of these inspections are made by one deputy inspector who reports that no prosecutions were necessary, and that he has no difficulty in securing compliance with the orders given.

RESULTS OF INSPECTIONS UNDER THE BLOWER LAW—JULY 1, 1920, TO JUNE 30, 1921.

Location.	Industries.											Number of employees.		Number of hours.		Number of wheels.		Orders issued for								
	Number of inspections.	Job shops.	Stoves.	Tools and implements.	Beds.	Fixtures.	Cutlery and hardware.	Novelties.	Machinery and foundries.	Jewelry.	Miscellaneous.	Total.	Male.	Female.	Eight hours.	Nine hours.	Total.	Protected.	Unprotected.	Total.	Increase velocity.	Improve equipment.	Install system.	Provide hoods.	Change angle branch pipes.	Repairs and clean pipes.
Chicago and Cook Co....	925	308	8	2	4	51	367	77	27	5	76	7,495	7,481	14	256	669	7,495	7,262	233	204	32	22	93	20	17	20
State of Illinois outside Cook Co.....	41	2	8	1	--	1	10	10	--	9	--	610	590	20	10	31	610	600	10	33	18	9	4	2	--	--
Total for entire State.	966	310	16	3	4	52	377	87	27	14	76	8,105	8,071	34	266	700	8,105	7,862	243	237	50	31	97	22	17	20

THE WASH HOUSE LAW.

Orders were issued by this division for the installation of 216 wash houses in Chicago and Cook County and 27 in the State outside of Chicago and Cook County. In 190 instances orders have been fully complied with, 128 orders being in course of completion.

RESULTS OF INSPECTIONS UNDER THE WASH HOUSE LAW—JULY 1, 1920, TO JUNE 30, 1921.

Location.	Inspections.	Employees.	Complied.	Orders pending completion.
New inspections—				
Chicago and Cook County.....	216	15,207	—	—
State of Illinois outside Cook County.....	27	5,459	—	—
Re-inspections—				
Chicago and Cook County.....	77	—	155	78
State of Illinois outside Cook County.....	15	—	35	50
Total.....	335	20,666	190	128

HEALTH, SAFETY AND COMFORT LAW.

This table shows that 7,485 inspections were made in Chicago and Cook County under the provisions of this law, and in the State of Illinois outside Cook County 1,947, which with ventilation inspections 134, (details of which are given in another table) makes a total for the State of 9,566 inspections.

One thousand, six hundred and sixty-nine orders were issued relating to buildings; 1,714 to sanitation, 3,087 to power; 800 to dangerous machinery; 13,273 to dangerous machinery parts, or a total of 20,543 orders issued.

RESULTS OF INSPECTIONS UNDER THE HEALTH, SAFETY AND COMFORT LAW—JULY 1, 1920, TO JUNE 30, 1921.

Location.	Total.	Out of business.	New orders issued.	Previous items complied with.	Previous orders checked up, no further orders issued.	Number of male employees.	Number of female employees.	Items complied with.	Building.	Sanitation.	Power.	Dangerous machinery.	Dangerous machinery parts.	Total.
Chicago and Cook County.....	7,485	430	3,320	2,339	1,396	36,643	55,053	19,091	1,279	1,270	2,654	698	11,258	17,159
State of Illinois outside Cook County.....	1,947	35	780	741	391	59,146	12,072	4,540	390	310	433	102	2,015	3,250
Ventilation.....	134	-----	19	-----	115	641	321	-----	-----	134	-----	-----	-----	134
Total.....	9,566	465	4,119	3,080	1,902	96,430	67,446	23,631	1,669	1,714	3,087	800	13,273	20,543

Table 8 gives a complete analysis of the orders issued.

ANALYSIS OF ALL ORDERS UNDER THE HEALTH, SAFETY AND COMFORT LAW—JULY 1, 1920, TO JUNE 30, 1921.

Classification.	Chicago and Cook County.	State outside Cook County.	Total.
I. Building—			
1. Exits and fire escapes.....	30	3	33
2. Doors, open, slide and roll.....	23	5	28
3. Stairs.....	34	11	45
4. Handrails and toeboards.....	321	198	519
5. Openings in floors.....	82	53	135
6. Elevators, automatic gates and slant boards.....	379	80	459
7. Elevator cars.....	52	20	72
8. Safety devices.....	11	11	22
9. Proper light.....	201	4	205
10. Heating systems.....	65	2	67
11. Passageways and obstructions.....	69	2	71
12. Dangerous places.....	12	1	13
Total.....	1,279	390	1,669
II. Sanitation—			
1. Toilets.....	506	190	696
2. Dressing and washing rooms.....	403	75	478
4. Seats for females.....	27	3	30
7. Ventilation, dust and fumes.....	298	38	336
8. Rooms, dry, clean and sanitary.....	16	2	18
9. Install or guard fans and blowers.....	3	2	5
10. Guard ovens, furnaces, pans, vats, etc.....	8	-----	8
11. Miscellaneous and ventilation, Section 11.....	143	-----	143
Total.....	1,404	310	1,714
III. Power—			
1. Engine stops and disengaging devices.....	62	2	64
2. Signal systems.....	18	-----	18
3. Belt shifters.....	66	-----	66
4. Boiler and engine rooms.....	85	2	87
5. Clutches, couplings and weights.....	607	39	646
6. Switches and throttles.....	10	26	36
7. Dynamos and motors.....	20	-----	20
8. Electric appliances.....	29	21	50
9. General orders.....	1,757	343	2,100
Total.....	2,654	433	3,087

ANALYSIS OF ALL ORDERS UNDER THE HEALTH, SAFETY AND COMFORT LAW—JULY 1, 1920, TO JUNE 30, 1921—Concluded.

Classification.	Chicago and Cook County.	State outside Cook County.	Total.
IV. Dangerous machinery—			
1. Hydro extractors.....	69	11	80
2. Mangles, rolls, drums, crushers and tumblers.....	52	26	78
3. Band saws.....	63	19	82
4. Circular saws.....	205	25	230
5. Planers.....	10	—	10
6. Shapers.....	4	—	4
7. Jointers.....	176	15	191
9. Sticklers and mortisers.....	35	—	35
10. Trip hammers, bulldozers and shears.....	5	1	6
11. Printing presses.....	79	5	84
Total.....	698	102	800
V. Dangerous machinery parts—			
1. Flywheels.....	827	184	1,011
2. Punch and drill presses at point of work.....	34	8	42
3. Planer and shaper beds under platen.....	106	59	167
4. Pipe machines and turret lathes.....	17	12	29
5. Gears.....	1,523	307	1,830
6. Belts and pulleys.....	6,352	1,156	7,508
7. Sprocket chains and conveyors.....	270	47	317
8. Shafting and roll bearings.....	934	68	1,002
9. Set screws and bolt keys.....	693	133	826
10. Emery wheels.....	491	21	512
11. Cranes.....	—	18	18
12. Cutters, feathers and leather splitters.....	9	2	11
Total.....	11,258	2,015	13,273
Grand total.....	17,293	3,250	20,543

THE BEDDING LAW.

The total number of inspections made under this law, (including a few omitted from last year's report, see page 6) for the entire State was 1,302. In two instances it was found necessary to prosecute to enforce the requirements of this division.

RESULTS OF INSPECTIONS UNDER THE BEDDING LAW—JULY 1, 1920, TO JUNE 30, 1921.

Location.	Inspections.	Males.	Females.
Chicago and Cook County.....	527	1,968	2,113
State of Illinois outside Cook County.....	775	1,774	1,140
Total.....	1,302	3,742	3,253

OCCUPATIONAL DISEASE LAW.

The number of firms reporting under classification "A" Lead Poisoning is shown as 233. Under class "B" Other Poisonings 101. The number of employees reported as sick was 141. (A complete diagnosis of each case is on file.) In all 93,377 employees were examined in the various industries coming under the provisions of this law during the fiscal year.

OCCUPATIONAL DISEASE REPORTS, SECTION 4 OCCUPATIONAL DISEASE LAW, CLASSIFIED BY INDUSTRIES—JULY 1, 1920, TO JUNE 30, 1921.

Industry.	Number of firms reporting.	Number of employees reported on for																							
		July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.	
		Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.
"A"—Lead poisoning—																									
White lead.....	4	299	23	300	302	4	171	15	1	233	3	259	8	263	13	190	10	278	—	—	—	—	—	—	—
Smelting and refining.....	42	2,580	2	2,562	2,574	5	2,374	7	2,030	5	1,818	4	1,548	1	1,619	2	1,648	2	1,673	2	1,429	2	1,431	1	1,431
Manufacturers of paints.....	30	486	1	553	504	4	470	411	4	422	449	1	451	454	—	—	—	—	—	—	—	—	—	—	—
Manufacturers of storage batteries.....	15	248	73	2	64	1	97	82	1	129	140	1	146	2	303	1	151	1	151	1	196	1	196	1	196
Manufacturers of tinware.....	8	415	2	435	346	1	390	315	64	64	298	1	166	1	131	130	142	130	142	130	142	130	142	130	142
Manufacturers of car seals.....	4	16	25	26	19	20	18	17	17	14	15	14	15	18	—	—	—	—	—	—	—	—	—	—	—
Switchboards and telephones.....	6	187	215	216	186	225	165	130	130	138	138	190	139	—	—	—	—	—	—	—	—	—	—	—	—
Painting.....	114	2,162	2,022	2,129	2,182	2,230	1,790	1,578	1,704	1,702	1,598	1,434	1,077	—	—	—	—	—	—	—	—	—	—	—	—
Electrotypers.....	1	71	8	62	81	64	80	58	57	62	66	81	7	—	—	—	—	—	—	—	—	—	—	—	—
Enameling.....	1	8	8	8	8	8	8	8	8	8	8	8	8	—	—	—	—	—	—	—	—	—	—	—	—
Wall paper and shade cloth.....	4	44	30	49	51	44	41	39	45	20	14	43	50	—	—	—	—	—	—	—	—	—	—	—	—
Glue, soap, etc.....	4	36	21	26	30	26	15	8	15	25	23	12	12	—	—	—	—	—	—	—	—	—	—	—	—
Total class "A".....	233	7 6,552	5 5,907	6 6,531	5 6,147	9 5,749	7 4,968	7 4,522	7 4,677	12 4,662	17 4,586	13 4,406	3 3,663	—	—	—	—	—	—	—	—	—	—	—	—
"B"—Other poisonings—																									
Arsenic, Paris green, etc.....	2	5	343	2	341	1	263	216	1	222	301	199	1	170	138	—	—	—	—	—	—	—	—	—	—
Brass foundries (a).....	63	1,828	4 1,953	5 1,897	3 1,653	2 1,719	1 1,620	5 1,264	1 1,152	3 1,201	1,210	1,213	3 1,201	—	—	—	—	—	—	—	—	—	—	—	—
Spinners and polishers (b).....	23	951	890	909	870	802	585	618	602	663	716	700	572	—	—	—	—	—	—	—	—	—	—	—	—
Plating electroplating.....	9	108	107	96	98	101	99	84	82	104	98	104	93	—	—	—	—	—	—	—	—	—	—	—	—
Deicomania.....	1	3	3	3	5	6	5	5	6	5	5	5	5	—	—	—	—	—	—	—	—	—	—	—	—
Galvanizing.....	3	30	30	32	28	32	31	30	18	25	25	24	6	—	—	—	—	—	—	—	—	—	—	—	—
Total class "B".....	101	7 3,229	7 3,328	7 3,277	4 2,800	3 2,923	1 2,565	6 2,244	1 2,161	2 2,303	2 2,233	3 2,166	1,628	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	334	14 9,781	12 9,295	15 9,808	9 9,047	12 8,672	8 7,534	13 6,766	8 6,838	12 6,965	19 6,818	16 6,572	3 5,291	—	—	—	—	—	—	—	—	—	—	—	—

VENTILATION, SECTION 11, HEALTH, SAFETY AND COMFORT LAW.

Results of inspections under this section of the Health, Safety and Comfort Law are given in detail, the totals being included in the Health, Safety and Comfort Law, table 7.

VENTILATION INSPECTIONS UNDER SECTION 11 OF THE HEALTH, SAFETY AND COMFORT LAW, JULY 1, 1920 TO JUNE 30, 1921.

Location.	Number of inspections.	Number of establishments visited.	Number of work-rooms inspected.	Number of employees (new orders).	New order.	Re-inspections.			Orders issued for	
						Total.	Complied.	In course of completion.	1600 cubic feet.	1800 cubic feet.
Chicago.....	134	134	158	962	19	115	67	48	13	9

ACCIDENTS.

Twenty-seven non-fatal accidents were reported, causing a loss of 812 days' time. Six fatal accidents are shown in the report. The reports of accidents are now sent direct to the Industrial Board.

PROSECUTIONS.

This table shows that 244 cases were prosecuted in the State, the fines being \$1,920, and costs \$1,605.20, a total of fines and costs of \$3,525.20 for the entire State.

PROSECUTIONS—JULY 1, 1920, TO JUNE 30, 1921.

Chicago and Cook County.		Number of cases.
Child Labor Law.....		106
Women's Ten-Hour Law.....		21
Wash House Law.....		1
Health, Safety and Comfort Law.....		4
Bedding Law.....		2
Total.....		134
Total fines.....		\$895 00
Total costs.....		500 75
State of Illinois outside Cook County		Number of cases.
Child Labor Law.....		91
Women's Ten-Hour Law.....		17
Wash House Law.....		2
Total.....		110
Total fines.....		\$1,025 00
Total costs.....		1,104 45

PROSECUTIONS—JULY 1, 1920, TO JUNE 30, 1921—Concluded.

	Fines.	Costs.	Total.	Number of cases.
Chicago and Cook County.....	\$ 895 00	\$ 500 75	\$1,395 75	134
State of Illinois outside Cook County.....	1,025 00	1,104 45	2,129 45	110
Total.....	\$1,920 00	\$1,605 20	\$3,525 20	244

CHILDREN'S WORKING CERTIFICATES.

The total number of child labor certificates issued in the State of Illinois for the fiscal year ended June 30, 1921, was 36,208. It is to be noted, however, that the number of certificates issued has no bearing on the number of children employed as in many instances several certificates are issued to the same minor.

DIVISION OF AURORA FREE EMPLOYMENT OFFICE.

FRANK RADUENZ, *Superintendent.*

During the years of the World War the free employment offices performed yeoman service in a period of "over employment" while in the past year the remarkable records of employment offices have proven their usefulness and necessity during the stress of unemployment. The experience in meeting the many problems during and following the World War was a powerful factor in meeting the new situation for public employment office work. The economic conditions in the industrial world are too well known to need further comment. During the periods of intensive production and salesmanship much time was given to efficiency of machines and economic methods of management and not enough to the psychology of the individual workman—as to what he was thinking and how this might revert to the good or ill of the business or to society. In this vicinity employers generally and the employment office in particular have given attention to the mental side of the workers in order to give the greatest possible satisfaction to employer and employee. As far as conditions permitted the selection of workers who were directed to employment was based not only on their experience and skill but on certain personal attributes necessary for the employer and job to be filled.

During the fiscal year commencing July 1, 1920, there were received at the office 5,137 calls for help from employers, requesting 6,726 workers. Had there been an unusual shortage of help from industrial quarters, the workers applied for by such a large number of employers' calls might have been four or five times as great. Nine thousand seven hundred and ninety-two people registered for work. Many of them came into the office many times. Six thousand three hundred and seventy-two were directed to work of whom 5,310 were reported hired. Indirectly many others found employment through someone directed by the employment office. This, however, is regarded as a wonderful record for an employment office located in a city of less than 50,000 population during what is called a period of industrial depression.

The greatest demand for, the largest shortage and the most difficult problem was in the placing of farm hands. The terrific drop in prices of farm products and the lower farm wages unstabilized the farm hand situation. Many agricultural workers applying had to be advised to hold their present jobs as the changed circumstances facing them individually were the same for all others. One thousand two hundred and twenty-

two farm hand placements were recorded for dairy and grain farms throughout this territory.

This fiscal year was a slack season for the many metal and machinery shops. Five hundred and fifty-seven placements were recorded, over 40 per cent of these were skilled mechanics of many kinds. One hundred and forty-five placements were secured for clerical workers. These included bookkeepers, stenographers, store salesmen, solicitors, office clerks, a high school teacher, draftsmen, technical engineer, foreman, commercial executive, etc. Cooks, laundry men, kitchen workers and porters for whom work was found numbered 141.

In the building trades 224 placements were reported, 60 per cent of which were helpers, 40 per cent skilled and semi-skilled workmen. In this age of automobiles out of 180 applicants for truck driving and chauffeurs' positions only 29 placements were possible, while 40 teamsters secured work through the office.

This was not a fortunate year for boys to get jobs. Ninety placements were made, 54 of which were for farms. Employers and the employment office preferred to center their activities in favor of idle men.

Five hundred and twenty-six men accepted common labor jobs classified outside of shop and building trade work. Among the miscellaneous short casual jobs 729 placements were listed. These ranged from unloading coal cars to garden making, rug beating, etc.

The 1,436 female placements by the office may be classified as follows: One hundred and thirty were clerical, including stenographers, salesladies, office clerks, bookkeepers and others. Ninety-eight were hired as machine operators and for other factory work. One hundred and sixty-six accepted work as restaurant cooks and chambermaids, and for dining room and kitchen work. Three hundred and one included domestic cooks, maids, housekeepers, nurse maids and companions. Three hundred and eighteen were hired to do household laundress work. Most of these arranged to do washing and ironing regularly with the families to whom they were directed for a certain number of hours each week allowing the office credit for one placement per family. Four hundred and twenty-three placements were other day workers who were directed to homes, stores and offices to do cleaning for a certain number of hours or days, usually for each week. The number of applicants for clerical work and for factory work greatly exceeded the opportunities available. The supply and demand of female restaurant and hotel workers and of housekeepers were nearly evenly balanced. Throughout the whole year there was a large shortage of competent household cooks and maids. This necessarily increased the demand for household laundresses and day workers for homes.

In a condensed annual report justice cannot be done to the great amount of welfare work accomplished in a year. A human interest story

could be gathered daily and they soon appear commonplace in good employment offices. A typical one is that of a Hungarian worker last winter. He was thirty-eight years old, had bought a little home, had five children, and worked twelve years since he came to this country, as a helper at car repairing. He had some difficulty with his foreman, was laid off and thereafter was sick for almost six months. His savings had become exhausted, it became hard to get necessary groceries and coal so when he became stronger his doctor who had exhausted all means he knew of to find employment for him brought him to this office to see what we could do for him. A personal effort was made to get his old job back but this was impossible. He was taken to several shops but they were not in need of any one for the kind of work he could do but said he might call again. A letter of introduction from the employment office was then given him to the superintendent of a large factory and he was advised to take his twelve year old daughter with him to do the talking. He proceeded to the factory and immediately the superintendent called up the office to say that they were not in need of help, things were rather slack but that he hired that man Jacobs sent to him and if we had more men like him who needed and wanted work as much as he did to send them on.

There are some men and some women who at first seem hopeless possibilities for a satisfactory placement. One of these, for illustration, was a woman seventy-five years old who for over thirty years saved and slaved in the weaving room of the cotton mill in Aurora. One of her daughters whose husband had just bought a farm in Wisconsin took her along and her savings were included in paying for the farm. In return she was promised a home there for the rest of her life. Then things did not go smoothly. The farm was not paying well and there were personal differences and the old lady returned to Aurora almost penniless. She could not get back in the cotton mill because she was so old, they were not in need of help then, and because she quit of her own free will. There wasn't a call for help on file into which she could be fitted. One day a farmer and his wife owning over 500 acres of land who often come to the employment office for single or married farm hands were approached and the situation of this woman explained to them. Mrs. B——, the farmer's wife with her big Irish heart, said she would come down later with her car to get her if she would go along. The old lady who was nervous and irritable when she first came to the employment office, several months later sent word she was satisfied and happy—that she is getting wages and has a home. Mrs. B—— stated she could stay with them all the rest of her life if she cared to.

There was the returned soldier who was gassed—there were many of them—how he was carried along for months on short jobs and finally landed a steady elevator job. His personality, his own pride kept him away from the whereabouts of his relatives and his reserved man-

ner perhaps hindered him from receiving a disability classification to get more compensation from the government.

Then there was the loquacious hobo, who fresh from a dirty freight car, came to the employment office "broke." After a temporary porter job he was directed to a restaurant for work. About six months later he married one of the women sent to the same kitchen for work. It is hoped they will live together long and happily.

Fathers often come to the office to get the address of a son and brothers sometimes find each other through the records of the office. A similar incident occurred when a young man who had been in the navy, had knocked about the world and did not have a regular home to go to, came in last summer. He had been brought up on a farm, had attended high school and dropped into Aurora on his travels, never having been here before. The only job he might get at the time was a farm job but he had no money to pay fare. His name was A——, and he was asked if he had relatives in this vicinity. He did not know although he was sure he had some somewhere. He was directed to a farm not too far away and was advised it was near to what was called the A—— farms. Several weeks later he came back to the office with new clothes, with several new grips, and with a radiance of smiles to thank us and to inform us he was on his way to make arrangements to attend the Illinois State University at Champaign. He found his uncle and he was very well to do.

The office has the cooperation not only of all local social agencies, employers, labor organizations, chambers of commerce and many farm bureaus, but of the whole general public. When the local American Legion Post promoted a publicity drive on jobs for unemployed ex-service men there was complete harmony and cooperation. Their efforts were greatly appreciated and they directed all information toward this office when it was made plain that the present Governor of Illinois had standing orders in all State employment offices that ex-service men should be given the preference for jobs whenever conditions warranted. This principle has been a standing rule in this office.

A public employment office cannot do its greatest amount of good under cover, regardless of the amount of labor its officials may perform. The community and the public at large, therefore, is greatly indebted to news features about the State employment service by the Aurora Beacon-News, by the Aurora Daily Star and by other publications in this vicinity. The press has aided in removing all skepticism in regard to public employment offices. Good work has made this branch of service a permanent institution. Changing industrial conditions must however keep its personnel alert and active in order to improve its efficiency and service further, and to fulfill the trust and obligations to meet society's expectations.

DIVISION OF GENERAL ADVISORY BOARD OF THE FREE EMPLOYMENT OFFICES.

F. S. DEIBLER, PH. D., *Chairman.*

A. H. R. ATWOOD, M. D., *Secretary.*

OSCAR G. MAYER.

JOHN H. WALKER.

MRS. RAYMOND ROBINS.

The records compiled by the General Advisory Board from the operations of the Free Employment Offices of the State began to show early during the present fiscal year a slowing down of industry in the State.

By referring to Table 5, where the number registered in relation to the number of persons called for by employers is shown, the falling off in demand is very evident. The number of registrations per 100 help wanted ranged from 99 in July, 1920, to 241 in June, 1921.

The accompanying chart shows how the supply and demand for labor have been related to each other, so far as the records of the Free Employment Offices reveal these facts—from February, 1920, to June, 1921.

It became apparent by the end of October, 1920, that the coming winter would see a large amount of unemployment. The General Advisory Board, acting upon the legislative authority given it, called together a group of citizens representing employers, labor and social agencies, and laid the facts collected before them. It was the thought of the board that the community should become acquainted with the situation and make such plans for meeting the emergency as seemed wise.

As a result of this conference a plan was proposed for dealing with the problem, the most important feature of which was to make the Free Employment Offices the central agency through which the supply and demand for labor would flow.

Publicity concerning the situation was given to employers' associations throughout the State. The newspapers of the State were kept informed as to the situation and were requested to urge upon employers that they retain their help as long as possible in order to avoid the consequences of a period of serious unemployment. In this endeavor very cordial support was received from the press of the State.

In addition to the statistics of operation of the offices, the local superintendents were requested to make a report on the numbers nor-

mally employed and those employed at the end of May, 1920. These figures showed a very large amount of unemployment. These statistics seemed of such great importance that the Board decided to compile the regular monthly compilation of figures on unemployment in representative establishments in the State.

Early in the spring of 1920 a letter was written to the superintendent in each county, calling attention to the location of the Free Employment Offices, and indicating the location of each office and the name of its superintendent. Every means that was available for which the unemployed could find work was attempted. The effects of the depression left many persons unemployed, as the result of the year.

However, during the year, 1920, the work was done through the various offices of the State. This work was done without expense to the individuals seeking work and through the great service which the Free Employment Offices were rendering the employers and employees of the State.

The accompanying tables give the detailed figures of operation for each of the offices by month.

TABLE 1—REGISTRATIONS.

Offices.	July, 1920.			August, 1920.			September, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	555	152	707	623	110	739	585	136	721
Bloomington.....	403	50	453	355	65	420	423	45	468
Chicago.....	17,846	2,165	20,011	12,818	2,302	15,320	11,323	2,115	13,438
Danville.....	244	53	297	175	45	220	146	36	182
Decatur.....	270	111	382	294	119	413	373	127	500
East St. Louis.....	275	768	1,043	165	721	886	308	1,011	1,319
Joliet.....	275	251	526	438	210	648	435	1,011	1,446
Peoria.....	344	385	729	541	435	976	379	427	806
Rockford.....	570	510	1,080	732	489	1,221	379	427	806
Rock Island.....	753	510	1,263	732	489	1,221	379	427	806
Springfield.....	1,163	300	1,463	882	262	1,144	379	427	806
Total.....	577	237	814	568	199	767	569	186	755
Total.....	23,000	4,982	27,982	17,711	4,963	22,674	16,736	5,315	22,051

THE DEPARTMENT OF LABOR.

TABLE 1—REGISTRATIONS—Continued.

Offices.	October, 1920.			November, 1920.			December, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	709	161	870	769	193	962	865	164	1,029
Bloomington.....	610	63	673	514	78	592	509	92	601
Chicago.....	10,279	2,266	12,545	8,500	2,191	10,691	10,179	1,977	12,156
Danville.....	188	46	234	177	45	222	143	53	196
Decatur.....	539	100	639	396	144	540	581	137	718
East St. Louis.....	147	677	824	146	667	813	106	742	848
Joliet.....	429	223	652	456	246	702	458	207	665
Peoria.....	536	371	907	533	392	925	664	363	1,027
Rockford.....	952	570	1,522	1,039	549	1,588	698	460	1,158
Rock Island.....	1,142	306	1,448	742	246	988	868	310	1,178
Springfield.....	454	178	632	437	149	586	350	143	493
Total.....	15,985	4,961	20,946	13,709	4,900	18,609	15,421	4,648	20,069

TABLE 1—REGISTRATIONS—Continued.

Offices.	January, 1921.			February, 1921.			March, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	662	192	854	339	160	549	598	204	802
Bloomington.....	530	125	655	565	109	674	629	118	747
Chicago.....	13,534	2,595	16,129	10,481	2,072	12,553	11,464	2,280	13,744
Danville.....	120	74	194	89	65	154	146	80	226
Decatur.....	607	164	771	325	118	443	609	166	775
East St. Louis.....	120	901	1,021	82	1,006	1,091	120	912	1,032
Joliet.....	546	292	838	681	309	990	611	334	945
Peoria.....	1,018	342	1,360	886	324	1,210	929	397	1,326
Rockford.....	445	565	1,010	351	458	809	607	606	1,213
Rock Island.....	1,873	356	2,229	1,601	322	1,923	1,749	349	2,098
Springfield.....	273	157	430	240	136	376	369	149	518
Total.....	19,728	5,763	25,491	15,690	5,082	20,772	17,831	5,595	23,426

TABLE 1—REGISTRATIONS—Concluded.

Offices.	April, 1921.			May, 1921.			June, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	659	200	859	564	208	772	899	219	1,118
Bloomington.....	642	145	787	542	164	706	632	167	799
Chicago.....	11,077	2,256	13,333	10,339	2,349	12,688	12,544	2,685	15,229
Danville.....	131	30	161	100	55	155	227	54	281
Decatur.....	448	175	623	461	208	669	666	166	832
East St. Louis.....	1,291	1,082	2,373	1,935	881	2,816	2,088	1,083	3,171
Joliet.....	502	223	725	454	205	659	558	232	790
Peoria.....	860	384	1,244	781	379	1,160	830	440	1,270
Rockford.....	518	549	1,067	420	437	857	450	500	950
Rock Island.....	925	352	1,277	663	336	999	868	394	1,262
Springfield.....	454	151	605	435	165	600	455	181	636
Total.....	17,507	5,547	23,054	16,694	5,387	22,081	20,217	6,121	26,338

DIVISION OF ADVISORY BOARD FOR FREE EMPLOYMENT OFFICES. 211

TABLE 2—HELP WANTED.

Offices.	July, 1920.			August, 1920.			September, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	536	137	673	537	124	661	597	146	743
Bloomington.....	385	47	432	419	59	478	478	67	545
Chicago.....	16,164	2,581	18,745	12,514	2,947	15,461	10,115	3,121	13,236
Danville.....	170	58	228	226	51	277	275	77	352
Decatur.....	379	97	476	250	106	356	312	154	466
East St. Louis.....	397	785	1,182	272	768	1,040	280	990	1,270
Joliet.....	441	201	642	536	269	805	464	261	725
Peoria.....	880	391	1,271	1,003	436	1,439	748	435	1,183
Rockford.....	1,380	521	1,901	1,474	538	2,012	1,517	512	2,029
Rock Island.....	1,507	297	1,804	1,030	373	1,403	1,192	335	1,527
Springfield.....	607	240	847	597	216	813	599	216	815
Total.....	22,846	5,355	28,201	18,848	5,787	24,635	16,577	6,314	22,891

TABLE 2—HELP WANTED—Continued.

Offices.	October, 1920.			November, 1920.			December, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	516	157	673	491	158	649	276	138	414
Bloomington.....	780	90	870	546	76	622	246	83	329
Chicago.....	8,723	2,691	11,414	4,641	2,050	6,691	3,176	2,000	5,176
Danville.....	132	59	191	359	35	394	67	38	105
Decatur.....	447	92	539	353	118	471	228	108	336
East St. Louis.....	114	714	828	220	739	959	92	605	697
Joliet.....	452	221	673	387	165	552	140	197	338
Peoria.....	714	373	1,087	631	390	1,021	378	345	723
Rockford.....	1,271	546	1,817	961	500	1,461	528	388	916
Rock Island.....	1,302	328	1,630	848	222	1,070	282	301	583
Springfield.....	460	193	653	482	168	650	303	177	480
Total.....	14,911	5,464	20,375	9,919	4,621	14,540	5,716	4,380	10,096

TABLE 2—HELP WANTED—Continued.

Offices.	January, 1921.			February, 1921.			March, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	224	148	372	205	116	321	324	196	520
Bloomington.....	172	94	266	202	103	305	409	119	528
Chicago.....	2,719	2,181	4,900	2,282	1,662	3,944	2,647	2,343	4,990
Danville.....	60	70	130	48	37	85	127	51	178
Decatur.....	114	107	221	148	105	253	254	184	438
East St. Louis.....	107	535	642	76	412	488	104	504	608
Joliet.....	95	214	309	161	215	376	170	269	379
Peoria.....	245	325	570	236	332	568	368	402	770
Rockford.....	419	455	874	349	432	781	689	522	1,211
Rock Island.....	309	304	613	250	242	492	428	294	722
Springfield.....	219	170	389	169	172	341	298	200	498
Total.....	4,683	4,603	9,286	4,126	3,828	7,954	5,885	5,024	10,829

TABLE 2—HELP WANTED—Concluded.

Offices.	April, 1921.			May, 1921.			June, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	358	185	543	328	190	518	445	194	639
Bloomington.....	350	159	509	311	155	466	507	132	639
Chicago.....	3,639	2,097	5,736	2,623	2,169	4,792	2,661	2,287	4,948
Danville.....	188	41	229	54	47	101	68	42	110
Decatur.....	200	156	356	257	196	453	350	143	493
East St. Louis.....	117	407	524	167	413	580	198	427	625
Joliet.....	154	189	343	192	173	365	192	172	364
Peoria.....	391	373	764	292	367	659	216	393	609
Rockford.....	630	503	1,133	483	500	983	605	476	1,081
Rock Island.....	409	315	724	383	304	687	617	361	978
Springfield.....	282	168	450	232	199	431	330	161	491
Total.....	6,718	4,593	11,311	5,322	4,713	10,035	6,189	4,758	10,947

TABLE 3—REFERRED.

Offices.	July, 1920.			August, 1920.			September, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	453	126	579	519	110	629	521	125	646
Bloomington.....	382	44	427	316	50	366	397	33	430
Chicago.....	15,962	2,080	18,042	11,478	2,234	13,712	10,175	2,659	12,834
Danville.....	204	46	250	166	86	252	168	44	212
Decatur.....	252	82	334	267	92	359	348	109	457
East St. Louis.....	274	752	1,026	165	712	877	308	819	1,027
Joliet.....	287	234	521	383	237	620	400	211	611
Peoria.....	570	385	955	541	435	976	538	404	942
Rockford.....	707	412	1,119	719	438	1,157	834	391	1,225
Rock Island.....	1,130	233	1,363	849	211	1,060	947	251	1,198
Springfield.....	562	220	782	553	185	738	552	181	733
Total.....	20,804	4,614	25,418	15,956	4,740	20,696	15,088	5,227	20,315

TABLE 3—REFERRED—Continued.

Offices.	October, 1920.			November, 1920.			December, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	525	149	674	485	155	640	314	134	448
Bloomington.....	577	56	633	508	68	576	273	75	347
Chicago.....	8,787	2,329	11,116	4,798	1,935	6,733	3,347	1,733	5,080
Danville.....	147	43	190	150	28	178	76	42	118
Decatur.....	506	86	592	367	119	486	231	118	349
East St. Louis.....	147	677	824	160	647	807	106	575	681
Joliet.....	385	190	575	391	190	581	150	192	342
Peoria.....	535	365	900	531	384	915	346	840	686
Rockford.....	830	445	1,275	685	398	1,083	439	327	766
Rock Island.....	1,125	247	1,372	712	198	910	272	241	513
Springfield.....	442	100	542	431	139	570	301	138	439
Total.....	14,006	4,747	18,753	9,218	4,261	13,479	5,854	3,915	9,769

DIVISION OF ADVISORY BOARD FOR FREE EMPLOYMENT OFFICES. 213

TABLE 3—REFERRED—Continued.

Offices.	January, 1921.			February, 1921.			March, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	218	140	358	307	115	322	307	167	474
Bloomington.....	211	88	299	249	89	338	448	97	545
Chicago.....	2,969	1,918	4,887	2,363	1,480	3,743	3,112	1,806	4,917
Danville.....	54	84	138	75	48	118	118	51	169
Decatur.....	155	113	268	141	95	236	470	142	612
East St. Louis.....	112	549	661	71	415	486	108	499	607
Joliet.....	102	243	345	174	267	441	172	229	401
Peoria.....	243	316	559	281	317	548	357	392	749
Rockford.....	389	439	828	337	367	704	566	459	1,025
Rock Island.....	298	257	555	249	223	472	417	260	677
Springfield.....	223	140	363	176	120	296	288	187	425
Total.....	4,974	4,287	9,261	4,273	3,521	7,794	6,363	4,288	10,601

TABLE 3—REFERRED—Concluded.

Offices.	April, 1921.			May, 1921.			June, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	350	169	519	317	177	494	422	168	590
Bloomington.....	384	120	504	288	138	426	505	123	628
Chicago.....	3,748	1,812	5,560	2,848	1,717	4,565	2,837	1,926	4,763
Danville.....	135	27	162	60	56	116	132	40	172
Decatur.....	299	147	446	377	159	536	549	130	679
East St. Louis.....	122	384	506	161	422	583	198	363	561
Joliet.....	152	192	344	117	230	347	195	230	425
Peoria.....	391	370	761	291	364	655	215	378	593
Rockford.....	475	445	920	388	373	760	434	414	848
Rock Island.....	404	274	678	380	247	627	608	292	900
Springfield.....	285	136	421	244	145	389	394	148	452
Total.....	6,745	4,076	10,821	5,471	4,027	9,498	6,390	4,212	10,602

TABLE 4—PLACED.

Offices.	July, 1920.			August, 1920.			September, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	370	93	463	432	89	521	418	104	522
Bloomington.....	327	52	379	269	33	302	322	23	345
Chicago.....	14,451	1,614	16,065	10,290	1,699	11,989	9,194	2,042	11,236
Danville.....	186	27	213	159	27	186	150	36	186
Decatur.....	204	67	271	210	71	281	226	76	302
East St. Louis.....	239	685	924	161	701	862	201	753	954
Joliet.....	248	164	412	305	193	498	318	173	491
Peoria.....	531	377	908	524	430	954	511	403	914
Rockford.....	688	389	1,077	704	419	1,123	812	362	1,174
Rock Island.....	998	211	1,209	768	186	954	856	221	1,077
Springfield.....	488	175	663	473	151	624	478	153	631
Total.....	18,730	3,834	22,564	14,295	3,999	18,294	13,486	4,346	17,832

TABLE 4—PLACED—Continued.

Offices.	October, 1920.			November, 1920.			December, 1920.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	434	111	545	397	123	520	261	111	372
Bloomington.....	556	40	596	438	54	492	216	60	276
Chicago.....	8,080	1,732	9,762	3,990	1,440	5,430	2,747	1,278	4,025
Danville.....	121	32	153	146	21	167	69	18	87
Decatur.....	395	60	455	318	79	397	149	77	226
East St. Louis.....	135	662	797	144	603	747	106	516	622
Joliet.....	304	162	466	333	145	478	153	145	298
Peoria.....	514	358	872	514	375	889	345	332	677
Rockford.....	811	428	1,239	675	369	1,044	418	295	713
Rock Island.....	1,016	221	1,237	634	164	798	267	213	480
Springfield.....	381	119	500	381	113	494	268	116	384
Total.....	12,697	3,925	16,622	7,970	3,486	11,456	4,999	3,161	8,160

TABLE 4—PLACED—Continued.

Offices.	January, 1921.			February, 1921.			March, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	183	119	302	172	97	269	260	143	403
Bloomington.....	119	61	180	184	66	250	379	74	453
Chicago.....	2,305	1,348	3,653	1,716	1,081	2,797	1,968	1,328	3,296
Danville.....	34	37	71	43	21	64	107	33	140
Decatur.....	91	78	169	74	70	144	259	107	366
East St. Louis.....	111	477	588	66	362	428	99	410	509
Joliet.....	95	173	268	140	217	357	158	179	337
Peoria.....	236	307	543	229	305	534	353	382	735
Rockford.....	375	383	758	316	321	637	536	398	934
Rock Island.....	287	228	515	235	195	430	396	232	628
Springfield.....	202	95	297	156	81	237	251	110	361
Total.....	4,038	3,306	7,344	3,331	2,816	6,147	4,766	3,396	8,162

TABLE 4—PLACED—Concluded.

Offices.	April, 1921.			May, 1921.			June, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Aurora.....	300	146	446	274	151	325	373	149	522
Bloomington.....	336	104	440	255	118	473	453	103	556
Chicago.....	2,827	1,337	4,164	2,122	1,327	3,449	2,031	1,403	3,434
Danville.....	114	21	135	58	27	85	90	26	116
Decatur.....	193	107	300	259	134	393	308	100	408
East St. Louis.....	120	330	450	123	373	496	187	324	511
Joliet.....	142	154	296	111	169	280	184	168	352
Peoria.....	387	362	749	290	359	649	209	365	574
Rockford.....	447	393	840	373	335	708	416	375	791
Rock Island.....	375	251	626	353	218	571	575	250	825
Springfield.....	259	101	360	217	114	331	275	116	391
Total.....	5,500	3,306	8,806	4,435	3,325	7,760	5,101	3,379	8,480

TABLE 5—NUMBER REGISTERED PER 100 HELP WANTED.

Offices.	July, 1920.			August, 1920.			September, 1920.		
	Male.	Female.	Both sex.	Male.	Female.	Both sex.	Male.	Female.	Both sex.
Aurora.....	104	111	—	116	94	—	100	93	—
Bloomington.....	105	106	—	85	110	—	88	87	—
Chicago.....	110	84	—	103	78	—	114	83	—
Danville.....	144	91	—	77	88	—	71	77	—
Decatur.....	71	114	—	118	112	—	120	82	—
East St. Louis.....	69	98	—	61	94	—	74	83	—
Joliet.....	78	125	—	82	78	—	98	80	—
Peoria.....	65	98	—	54	100	—	72	94	—
Rockford.....	55	88	—	51	91	—	58	83	—
Rock Island.....	77	101	—	86	96	—	82	88	—
Springfield.....	95	99	—	95	92	—	95	88	—
Total for the whole State.....	101	93	99	94	86	92	101	84	96

TABLE 5—NUMBER REGISTERED PER 100 HELP WANTED—Continued.

Offices.	October, 1920.			November, 1920.			December, 1920.		
	Male.	Female.	Both sex.	Male.	Female.	Both sex.	Male.	Female.	Both sex.
Aurora.....	137	103	—	157	122	—	13	119	—
Bloomington.....	78	70	—	94	102	—	207	111	—
Chicago.....	118	84	—	183	107	—	320	99	—
Danville.....	142	78	—	49	128	—	213	139	—
Decatur.....	121	108	—	112	122	—	255	127	—
East St. Louis.....	129	95	—	66	90	—	115	123	—
Joliet.....	95	101	—	118	149	—	327	105	—
Peoria.....	75	99	—	84	101	—	176	105	—
Rockford.....	75	104	—	108	110	—	132	119	—
Rock Island.....	88	93	—	87	111	—	308	103	—
Springfield.....	99	92	—	91	95	—	116	81	—
Total for the whole State.....	107	91	103	138	106	128	270	106	199

TABLE 5—NUMBER REGISTERED PER 100 HELP WANTED—Continued.

Offices.	January, 1921.			February, 1921.			March, 1921.		
	Male.	Female.	Both sex.	Male.	Female.	Both sex.	Male.	Female.	Both sex.
Aurora.....	297	130	—	190	138	—	185	104	—
Bloomington.....	308	133	—	180	106	—	154	99	—
Chicago.....	498	119	—	459	125	—	433	97	—
Danville.....	200	106	—	185	176	—	115	157	—
Decatur.....	532	153	—	220	112	—	240	90	—
East St. Louis.....	112	168	—	108	245	—	115	181	—
Joliet.....	573	136	—	423	144	—	359	160	—
Peoria.....	416	106	—	375	98	—	252	99	—
Rockford.....	106	124	—	101	106	—	88	116	—
Rock Island.....	606	117	—	640	132	—	409	119	—
Springfield.....	125	92	—	142	79	—	129	75	—
Total for the whole State.....	421	125	275	380	138	261	307	111	216

TABLE 5—NUMBER REGISTERED PER 100 HELP WANTED—Concluded.

Offices.	April, 1921.			May, 1921.			June, 1921.		
	Male.	Female.	Both sex.	Male.	Female.	Both sex.	Male.	Female.	Both sex.
Aurora.....	184	108	-----	172	100	-----	202	113	-----
Bloomington.....	183	91	-----	174	106	-----	125	128	-----
Chicago.....	304	108	-----	394	108	-----	471	110	-----
Danville.....	70	73	-----	185	117	-----	334	120	-----
Decatur.....	224	112	-----	179	106	-----	190	116	-----
East St. Louis.....	1,103	266	-----	1,159	213	-----	1,055	254	-----
Joliet.....	326	118	-----	236	118	-----	191	135	-----
Peoria.....	220	103	-----	267	103	-----	383	112	-----
Rockford.....	82	109	-----	87	87	-----	74	105	-----
Rock Island.....	226	112	-----	173	111	-----	141	109	-----
Springfield.....	161	90	-----	188	83	-----	138	112	-----
Total for the whole State.....	261	121	204	314	114	220	327	129	241

TABLE 6—NUMBER PLACED PER 100 REGISTERED.

Offices.	July, 1920.		August, 1920.		September, 1920.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	67	61	69	77	70	76
Bloomington.....	81	64	76	51	76	51
Chicago.....	51	74	80	74	80	79
Danville.....	78	51	91	60	76	61
Decatur.....	76	60	75	60	61	60
East St. Louis.....	87	89	98	97	97	92
Joliet.....	71	61	70	92	70	83
Peoria.....	93	98	97	99	93	99
Rockford.....	91	76	94	86	91	85
Rock Island.....	86	70	87	71	88	75
Springfield.....	85	74	83	76	84	81
Total for the whole State.....	81	77	81	81	81	82

TABLE 6—NUMBER PLACED PER 100 REGISTERED—Continued.

Offices.	October, 1920.		November, 1920.		December, 1920.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	61	69	52	64	30	68
Bloomington.....	91	63	85	69	42	65
Chicago.....	78	76	47	66	27	65
Danville.....	64	69	82	47	48	34
Decatur.....	73	60	80	55	26	56
East St. Louis.....	92	98	99	90	100	69
Joliet.....	71	73	73	59	33	71
Peoria.....	96	96	96	96	52	91
Rockford.....	85	75	65	67	60	64
Rock Island.....	89	72	85	67	31	69
Springfield.....	84	67	87	76	77	81
Total for the whole State.....	79	79	59	71	32	68

DIVISION OF ADVISORY BOARD FOR FREE EMPLOYMENT OFFICES. 217

TABLE 6—NUMBER PLACED PER 100 REGISTERED—Continued.

offices.	January, 1921.		February, 1921.		March, 1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	27	63	44	61	43	70
Bloomington.....	22	49	33	61	60	63
Chicago.....	17	52	16	53	17	58
Danville.....	29	50	48	32	73	41
Decatur.....	15	47	23	60	43	64
East St. Louis.....	92	52	80	36	83	45
Joliet.....	17	59	21	70	26	53
Peoria.....	23	90	26	94	38	96
Rockford.....	84	68	90	70	88	66
Rock Island.....	15	64	15	61	23	66
Springfield.....	74	61	68	60	68	74
Total for the whole State.....	20	57	21	55	27	61

TABLE 6—NUMBER PLACED PER 100 REGISTERED—Concluded.

Offices.	April, 1921.		May, 1921.		June, 1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	46	73	49	73	41	68
Bloomington.....	52	72	47	72	72	61
Chicago.....	26	59	21	56	16	52
Danville.....	87	70	58	49	40	48
Decatur.....	43	61	56	64	46	60
East St. Louis.....	10	31	7	42	9	30
Joliet.....	28	66	24	82	33	72
Peoria.....	45	92	37	95	25	83
Rockford.....	86	72	89	77	92	75
Rock Island.....	41	71	53	65	66	63
Springfield.....	57	67	50	69	60	64
Total for the whole State.....	31	60	27	62	25	55

TABLE 7—NUMBER PLACED PER 100 HELP WANTED.

Offices.	July, 1920.		August, 1920.		September, 1920.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	69	68	80	72	70	71
Bloomington.....	85	66	64	56	67	34
Chicago.....	89	63	82	58	80	65
Danville.....	109	47	70	53	55	47
Decatur.....	54	66	84	67	72	49
East St. Louis.....	60	87	60	91	72	76
Joliet.....	56	82	57	72	69	66
Peoria.....	60	96	52	99	60	92
Rockford.....	50	75	48	78	54	72
Rock Island.....	66	71	75	68	72	66
Springfield.....	80	73	79	70	79	71
Total for the whole State.....	82	72	76	69	81	69

TABLE 7—NUMBER PLACED PER 100 HELP WANTED—Continued.

Offices.	October, 1920.		November, 1920.		December, 1920.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	84	71	81	78	95	80
Bloomington.....	71	44	80	71	88	72
Chicago.....	92	64	86	70	86	64
Danville.....	92	54	41	60	103	47
Decatur.....	88	65	90	67	65	71
East St. Louis.....	118	93	65	82	110	85
Joliet.....	67	73	86	88	109	74
Peoria.....	72	96	81	96	91	96
Rockford.....	64	78	70	74	79	88
Rock Island.....	78	67	75	74	95	71
Springfield.....	83	62	79	67	88	66
Total for the whole State.....	85	72	80	75	88	72

TABLE 7—NUMBER PLACED PER 100 HELP WANTED.—Continued.

Offices.	January, 1921.		February, 1921.		March, 1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	82	80	84	84	80	73
Bloomington.....	69	65	91	64	93	62
Chicago.....	85	62	75	65	74	57
Danville.....	57	52	90	57	84	65
Decatur.....	80	73	50	66	102	58
East St. Louis.....	104	89	87	88	95	81
Joliet.....	100	81	87	101	93	85
Peoria.....	96	94	97	92	96	95
Rockford.....	89	84	91	74	78	76
Rock Island.....	93	75	94	81	93	78
Springfield.....	92	56	92	47	88	55
Total for the whole State.....	86	72	81	74	82	68

TABLE 7—NUMBER PLACED PER 100 HELP WANTED—Concluded.

Offices.	April, 1921.		May, 1921.		June, 1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	84	79	84	79	84	77
Bloomington.....	96	65	82	76	89	78
Chicago.....	77	64	81	61	76	62
Danville.....	61	51	107	57	132	62
Decatur.....	97	69	101	68	88	69
East St. Louis.....	103	81	74	90	94	76
Joliet.....	92	81	58	98	96	98
Peoria.....	99	97	99	98	96	93
Rockford.....	71	78	77	67	69	79
Rock Island.....	92	80	92	72	93	69
Springfield.....	92	60	94	57	83	72
Total for the whole State.....	82	72	83	71	82	71

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TABLE 8—NUMBER PLACED PER 100 REFERRED.

Offices.	July, 1920.		August, 1920.		September, 1920.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	83	74	83	81	80	83
Bloomington.....	85	73	85	66	81	70
Chicago.....	90	78	90	76	90	72
Danville.....	91	59	96	75	83	82
Decatur.....	81	82	79	77	65	70
East St. Louis.....	87	91	98	97	97	92
Joliet.....	86	70	80	81	80	82
Peoria.....	93	98	97	99	95	100
Rockford.....	97	94	98	94	97	93
Rock Island.....	88	91	90	88	90	88
Springfield.....	87	80	86	82	87	85
Total for the whole State.....	90	83	90	84	89	83

TABLE 8—NUMBER PLACED PER 100 REFERRED—Continued.

Offices.	October, 1920.		November, 1920.		December, 1920.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	83	74	82	79	83	83
Bloomington.....	96	71	86	79	79	80
Chicago.....	91	74	81	74	82	74
Danville.....	82	74	97	82	91	43
Decatur.....	78	70	87	66	65	65
East St. Louis.....	92	98	90	92	100	90
Joliet.....	79	85	85	76	102	76
Peoria.....	96	98	97	98	100	98
Rockford.....	98	96	99	93	95	90
Rock Island.....	90	89	89	87	98	88
Springfield.....	86	74	88	81	89	84
Total for the whole State.....	91	83	86	81	86	81

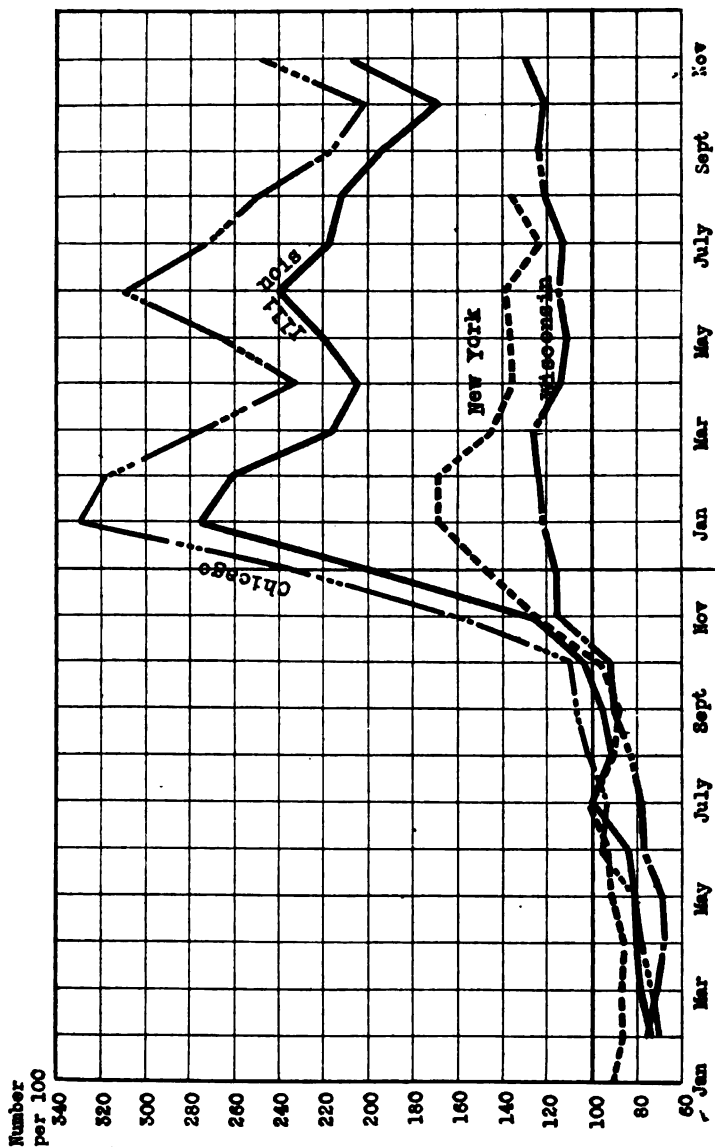
TABLE 8—NUMBER PLACED PER 100 REFERRED—Continued.

Offices.	January, 1921.		February, 1921.		March, 1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	84	85	83	84	85	86
Bloomington.....	57	69	74	74	85	76
Chicago.....	78	70	73	73	63	74
Danville.....	63	44	57	49	90	65
Decatur.....	59	69	52	71	55	75
East St. Louis.....	99	87	93	87	92	82
Joliet.....	93	71	80	84	92	87
Peoria.....	97	97	99	96	99	97
Rockford.....	96	87	94	87	95	87
Rock Island.....	96	89	94	87	95	89
Springfield.....	91	68	89	67	87	80
Total for the whole State.....	81	77	78	80	75	80

THE DEPARTMENT OF LABOR.

TABLE 8—NUMBER PLACED PER 100 REFERRED—Concluded.

Offices.	April, 1921.		May, 1921.		June, 1921.	
	Male.	Female.	Male.	Female.	Male.	Female.
Aurora.....	86	86	86	85	88	89
Bloomington.....	88	87	88	85	90	84
Chicago.....	75	74	75	77	72	73
Danville.....	84	78	97	48	68	65
Decatur.....	65	73	69	84	57	77
East St. Louis.....	98	84	76	88	94	89
Joliet.....	93	80	95	73	94	73
Peoria.....	99	98	100	99	97	97
Rockford.....	94	88	96	90	96	91
Rock Island.....	93	91	93	88	95	86
Springfield.....	91	74	89	79	90	78
Total for the whole State.....	82	81	81	83	80	80



Applications for employment per 100 jobs open at the State Free Employment Offices of Illinois, New York and Wisconsin.

**SUGGESTED LEGISLATIVE CHANGES TO IMPROVE THE
PRESENT OCCUPATIONAL DISEASE LAW, TO BRING
INDUSTRIAL DISEASES UNDER THE COMPENSATION
ACT, AND A METHOD ILLUSTRATIVE OF HOW
DISEASES COMING UNDER THE LAW SHOULD BE
DETERMINED.**

GEORGE L. APFELBACH, A. B., B. S., M. D.

The Illinois Occupational Disease Law, in effect July 1, 1911, was the result of a careful investigation of conditions in Illinois. Ten years have elapsed since the then Illinois Department of Factory Inspection has acted as a police power in enforcing the law. The Occupational Disease Law purposes only to prevent industrial diseases and does not provide against the economic loss which employee and employer and the community suffer when disease due to occupation arises.

Having studied the results of this act as regards disease prevention for the past ten years, it is felt that this experience gives competence to commend those who drafted this law, because of its conciseness and adequate measures. This type of legislation was new, information on the subject difficult to obtain and many mistakes might have been made. Most commendable of all is the fact that the law is specific in describing the common industrial hazards, making its enforcement practicable. The measures for disease prevention contained in the law are adequate and efficient and, as shown in the previous reports of this division, have brought results. Very few manufacturers, except the extremely penurious, object to the installation of such simple and cheap measures as washing facilities, lockers, working clothes, respirators and monthly medical examinations.

The operation of any law shows the good and bad in it and although there is occasion for pride because of past successes we can progress, and our laws can be improved only by taking cognizance of mistakes. The following are some of the more unfavorable criticisms of the Occupational Disease Law:

(1) Although preventative of industrial disease, the Occupational Disease Law does not offer compensation for those afflicted through the agency of the various occupational poisons.

(2) The law, although specific, does not include all the well-known occupational poisons and causes of disease.

(3) The law should require compulsory reporting of all occupational diseases, observed by all physicians and hospitals licensed to practice and to operate in the State.

(4) Every industry using the occupational poisons mentioned in the law should register yearly with the Illinois Division of Factory In-

spection. All newly launched industries should register and comply with the requirements of this law before commencing operations.

(5) The law should give a brief synopsis of what are considered reportable cases of industrial disease.

Public opinion abroad and in the United States recognizes the just basis for paying compensation to those injured, either by accident or disease in industry. Legislation for industrial accidents has been passed in many states. There is a marked tendency in favor of paying compensation for occupational diseases in many states and we believe that legislation for such is not far off in Illinois. Under the Workmen's Compensation Act for industrial accidents an employee suffering an injury receives a definite sum for the loss of time caused by the accident, including hospital and medical fees. Occupational diseases often cause permanent total disabilities and loss of life, or temporary total disabilities, throwing the worker on his own resources or making him a public charge, with no provision for medical services unless furnished by the community. His only recourse for economic recovery is the Common Law Court. The employer is likewise subjected to the continual worry of this loss and the liability to a large suit for damages.

Legislation to remedy this situation cannot be included in the present Occupational Disease Law very well, but should be enacted separately, either by a special Occupational Disease Compensation Act, or by including the industrial disease hazard under the present compensation act for industrial disabilities. It is felt that the best way would be to substitute the clause "personal injury," for the present "accidental injuries," as in the Massachusetts law.

At present section 2 of the Occupational Disease Law reads as follows:

2. Every employer in this State engaged in the carrying on of any process of manufacture or labor in which sugar of lead, white lead, lead chromate, litharge, red lead, arsenate of lead, or Paris green are employed, used or handled, or the manufacture of brass or the smelting of lead or zinc, which processes and employments are hereby declared to be especially dangerous to the health of the employees engaged in any process of manufacture or labor in which poisonous chemicals, minerals or other substances are used or handled by the employees therein in harmful quantities or under harmful conditions, etc.

The Supreme Court of this State holds that when a disease occurs in industry because of such industry and is not known as common to such industry the condition becomes an industrial accident, but if such disease occurs commonly and is recognized as one of the frequent occurrences in the industry the condition is recognized as an occupational disease.

Any law covering industrial diseases consequently should be specific, for otherwise many disputes will arise over such cases as occupational tuberculosis, emphysema, nerve fatigue, premature arteriosclerosis, and other vague conditions. It is therefore suggested that the law could specify such commonly known conditions as are contained in the British

Occupational Disease Law. Should new diseases, due to the various changes in industry arise, amendments to the act could be made, thus making the law keep pace with industrial progress.

Unfortunately, the precautions expected from compensation acts do not always prevent accidents and disease. The "Safety-First Movement" was transitory, and though insurance companies send out machine inspectors for the purpose of guarding dangerous appliances, the Department of Labor, Division of Factory Inspection still finds it necessary to enforce the Health, Safety and Comfort Act. A compensation law for industrial diseases would not make the present Occupational Disease Law useless but would stimulate its present function and for that reason some amendments to the present law are here suggested.

By requiring all physicians in the State to report industrial disease, much new information of scientific import could be obtained. Every physician in the State would by such enactment have the powers of a factory inspector in so far as industrial disease cases were concerned and would protect both employee and employer and supplement the regular inspection work of the State department.

In England, any one contemplating manufacture in which the hazards mentioned in the British Occupational Disease Law are met, must first consult the British Inspector of Factories. Certain regulations are prescribed and must be complied with before the manufacturer can begin operations. This requirement is a great saving to the employer, since it protects him against future inspections which might cause expensive alterations, and is also a protection to the employee against industrial disease. It is suggested, in addition to this requirement, that annual registration of industries coming under the Occupational Disease Act be made compulsory.

The question as to what is a reportable disease has caused much confusion in this State. Some physicians have been zealous in reporting all early cases, while others have subjected their companies to the risk of suit by reporting only the more pronounced cases. We feel that the Department of Labor should offer a standard of what constitutes reportable cases, and that a brief synopsis of this ruling should be embodied in the law. In other words, it would be well to have the term "reportable case" clearly defined in the law, as well as by departmental ruling.

In the above introduction has been reviewed the good and bad in the Occupational Disease Law. There has been shown the need for putting occupational diseases under some sort of a compensation act.

Much medical information on the subject of industrial disease has been assembled by the physicians of the Division of Factory Inspection and through the regular routine functions of that division. Lead poisoning has been the subject of particularly thorough investigation. It is, therefore, proposed in this article to offer information which will prove an aid to the suggestions made above, defining (1) what should be con-

sidered a reportable case of lead poisoning; and (2) what constitutes plumbism, so as to furnish basic data in considering a law of the required scope. In the future reports it is purposed to describe other occupational diseases, which are to give physicians a definite standard and to inform manufacturers what the Department of Labor considers a compliance with the Occupational Disease Law.

An early diagnosis is highly important and when it is made and the case reported, compliance with the law will have been established. There is a definite medico-legal advantage in this. An early diagnosis will also prevent further injury to employee, reduce disability, all of which is manifestly important if a compensation law be enacted. Besides, malingering will be prevented, by establishing a definite method of making a diagnosis. In addition, from a purely scientific and humanitarian standpoint, an early diagnosis is desirable in order to prevent the rapid fatal intoxications and also the sequellae of such poisons as lead, which Naegli calls meta-lead conditions as nephritis, arteriosclerosis, cerebral hemorrhage, and such neurological conditions, as paralysis, premature senility, neurosis and insanity.

Two things need here to be shown. First, a guide for or indication of what is considered a reportable case. Second, how a criterion for deciding compensable cases can be established. To do this, quotations will be made from an article published by the writer in the American Journal Medical Sciences, "The Early Diagnosis of Lead Poisoning with Special Reference to Abdominal Pain":

1. The Illinois Department of Factory Inspection has received reports of 1,338 cases of lead poisoning from July 1, 1912, to July 1, 1917. Owing to the lack of specific information in early reports only the last 934 case records can be depended upon, because they were made more in detail. Since a list of common lead findings on the report blanks has been instrumental in causing the examining physician to do more careful work in observing and recording findings.

These 1,338 examinations were made with a varying degree of completeness by physicians throughout the State. Since there is a decided medico-legal advantage in reporting plumbism to the State department, the physician usually makes an early diagnosis. As a result, the symptoms and signs reported in the above cases are early observations. Allowance must be made here and there for an absence of detail observation, since these factory examinations are often made in haste. Chart I refers to these reports.

2. Chart II refers to 72 cases of lead poisoning in which the examinations were made by the writer. In these the diagnosis is practically certain because basophilic degeneration, colic, lead tremor, lead anemia, usually in combination with constipation, were established. Very few of these cases were severe and were not of the type usually seen in hospital wards. They occurred in the lighter lead trades, such as painting, soldering, battery manufacturing and brass founding. For accuracy in deduction the writer is more inclined to use this smaller series than the larger number of cases reported in Chart I. Charts II, III and IV refer to the writer's own case records.

3. Further reference is made to Chart V, where the writer presents in tabulated form the results of 150 critical examinations of house painters not incapacitated but sent to the writer for the purpose of ascertaining early signs of plumbism and to furnish data for the improvement of health condi-

tions in this trade. We have since that time examined 30 printers and 75 more painters.

The above series of examinations brings out some important points in the diagnosis of lead poisoning, since they differ from the stereotyped pictures found in the classical text-books of medicine. It is hoped that this paper will explain why Cabot found evidence of undiagnosed plumbism in many of his autopsies.

The lead symptom-complex is so variable that a description is difficult, as all this may be dependent (1) on the dosage and rapidity of dosage; (2) on the presence of alloy in the metals ingested; (3) on the fact whether the intoxication occurs in the form of fumes or in the inhalation and swallowing of lead dusts; (4) on the individual susceptibility, sex, age and personal habits.

There are about 150 different lead trades from which all forms of plumbism can be developed. Among painters and printers mild forms may be seen; oftentimes these escape the physician's notice, only later to be recognized as a meta-lead condition.

Other blood findings in lead poisoning are chromatophiles in severe forms, macrocytes, microcytes and stippled normoblasts. Schnitter states that if the compensatory power of the blood-forming organs disappears, basophilic cells disappear.

Leukocytosis has been referred to as a blood finding, giving the average number of cells between 8,000 and 10,000, hence a marked increase of the white cells are rare.

SUBSIDIARY FINDINGS.

To finish the picture, reference must be made to some of the other findings in lead poisoning, as, for instance, rapid emaciation, loss of muscular strength, headaches, loss of vision, scaphoid abdomen, slow pulse, strangury, arthritis, lead paralysis of various forms, severe trembling, lead encephalopathy, anesthesiæ and hyperesthesiæ and reflex disturbances.

One word more in regard to blood pressure, which does not appear to be consistently present during an acute attack. When blood pressure has been reported in the State reports as a high-tension pulse there may have been other factors. At least this sign has not been observed as a usual finding. The systolic blood pressure in the examination of 150 painters was, on an average, 132 men between 20 and 29 inclusive; 132 between 30 and 32; 143 between 40 and 49; 150 between 50 and 59; 187.5 between 60 and 69; 210 over 70. The rise in blood pressure from lead is more liable to be a result of meta-lead condition than an actual finding during the manifestations of an acute or subacute attack.

CHART I.

Out of 934 cases of lead poisoning we enumerate the findings in the number of times reported:

		Per cent.
Blue line.....	518	55.4
Anemia.....	341	36.5
Constipation.....	335	35.87
Colic.....	295	31.58
Pallor.....	244	25.48
Coated tongue.....	215	21.3
Loss of muscular strength.....	161	17.1
Tremor.....	135	14.45
Abdominal tenderness.....	131	14.0
Slow pulse.....	130	14.0
Nausea.....	113	12.1
High-tension pulse.....	74	7.9
Headache.....	74	7.9
Loss in weight.....	50	5.3
Albuminuria.....	27	2.88
Dyspepsia.....	26	2.8
Wrist-drop.....	24	2.57
Abdominal pain.....	18	1.9
Other paralysis.....	10	1.0
Vertigo.....	11	1.0

Other symptoms reported were muscular pains, neuritis, sciatica, dermatitis, diarrheas, anorexia, visual disturbances, alopecia, conjunctivitis, ulcerations, rapid pulse, eructations, lumbago, metallic tests, jaundice, cyanosis, speech disturbance, ataxia, tinnitus and epileptiform seizures.

The result of blood smears were reported, but not in sufficient number to warrant tabulation.

CHART II.

APPELBACH—EARLY DIAGNOSIS OF LEAD POISONING.

In a critical examination of 72 cases of lead poisoning the following symptoms and signs occurred the following number of times:

	Per cent.
Constipation	59 81.9
Stippling	37 51.3
Blue line	26 36.1
Fine tongue tremor	39 54.1
Fine finger tremor	13 18.1
Anemia and pallor	25 34.7
Pallor	8 11.1
Anemia	14 19.4
Colic	23 31.9
Abdominal pain	18 25.0
Diminished strength in hand	7 10.0
Loss of muscular strength	7 10.0
Neuritis	12 18.0
Sciatica	1 1.4
Albuminuria	2 2.8
Convulsions	1 1.4
Cerebral hemorrhage	1 1.4
High blood-pressure	1 1.4
Coated tongue	Uncertain

CHART III.

Considering colic, constipation, tremor, anemia, blue line and stippling as the most common findings in lead poisoning they were observed in the following combinations:

Constipation, tremor, anemia	8
Tremor, stippling, constipation	7
Tremor, constipation	6
Constipation, blue line	5
Tremor, stippling	4
Anemia, constipation	4
Anemia, constipation, stippling	4
Anemia, constipation, tremor, stippling	4
Colic, constipation, tremor, anemia	3
Blue line, stippling, constipation, colic, anemia	3
Anemia, constipation, stippling	3
Colic, blue line, tremor, anemia	2
Blue line, pallor, anemia, tremor, constipation, stippling	2
Colic, constipation, tremor, anemia, blue line	2
Colic, constipation, tremor, blue line	2
Colic, constipation, blue line	2
Constipation, stippling	2
Blue line, tremor	1
Constipation, blue line, colic, tremor, stippling	1
Constipation, anemia, wrist-drop	1
Constipation, blue line, tremor, pallor, stippling	1
Anemia, stippling	1
Colic, constipation, tremor, anemia, blue line, stippling	1
Colic, constipation, tremor	1
Colic, constipation	1
Tremor, anemia, stippling	1
Constipation, stippling, colic	1
Constipation, blue line, anemia	1
Anemia, blue line	1
Tremor, anemia, blue line	1

CHART IV.

APPELBACH—EARLY DIAGNOSIS OF LEAD POISONING.

Reference to Chart III shows that the cardinal findings of lead poisoning do not appear in all cases. The following is a short tabulation of the number of times out of 72 cases in which the cardinals appeared:

All six (colic, constipation, pallor and anemia, blue line, stippling and tremor)	1
All five cardinals	5
All four cardinals	4
All three cardinals	10
All two cardinals	9

This arrangement seems to point to the fact that in early cases of lead poisoning there is more apt to be present but a few of the distinctly cardinal signs.

CHART V.

EXAMINATION OF 150 HOUSE PAINTERS—PRESENT COMPLAINTS.

	Mild.	Moderate.	Severe.
Loss of weight.....	18	8	5
Loss of strength.....	17	10	2
Nervousness.....	30	11	2
Malaise.....	5	5	2
Pulmonary:			
Cough.....	23	16	.....
Sputum.....	7	3	.....
Hemoptysis.....	5	3	.....
Night-sweats.....	9	6	1
Pains in chest.....	32	14	3
Hoarseness.....	...	2	.....
Dyspnea.....	6	9	5
Digestive:			
Nausea.....	13	3	.....
Vomiting.....	4	4	2
Eructations.....	4	4	1
Anorexia.....	19	8	5
Foul taste (mornings).....	12	4	.....
Salivary disturbances.....	2	.....	.....
Constipation.....	24	39	10
Diarrhea.....	5	1	.....
Melena.....	1	.....	.....
Hemorrhoids.....	6	7	2
Pain in abdomen.....	20	25	1
Distention.....	6	11	.....
Bulimia.....	...	.....	1
Polydipsia.....	...	.....	3
Sensorial:			
Headache.....	19	20	6
Vertigo.....	25	10	3
Syncope.....	2	.....	1
Spots before the eyes.....	25	18	1
Tightness in chest.....	...	2	2
Nightmare.....	2	.....	.....
Insomnia.....	11	7	.....
Rushing of blood to head.....	...	1	.....
Loss of memory.....	21	21	1
Depression.....	1	.....	.....
Confusion.....	2	.....	1
Diminished vision.....	13	19	8
Diminished hearing.....	5	5	1
Neuromuscular:			
Neuralgias.....	18	2	.....
Joint pains.....	22	28	9
Pain in right shoulder.....	17	15	11
Anesthesias.....	1	.....	.....
Paresthesias.....	2	4	.....
Lumbago.....	25	10	2
Swollen feet.....	...	2	1
Muscular cramps.....	9	4	.....
Trembling.....	3	1	.....
Formication.....	1	.....	.....
Diminished strength in hands (loss of hands).....	1	9	.....
Genito-urinary:			
Night urination.....	9	9	5
Incontinence.....	...	1	.....
Impotence.....	1	7	3
Hematuria.....	...	1	.....
Stricture.....	1	.....	.....
Polyuria.....	...	2	.....
General:			
Festering cuts.....	1	.....	.....
Itching eyes.....	17	7	1
Lacrimation.....	1	.....	1
Tinnitus.....	2	2	.....
Heart palpitation.....	2	2	.....

PHYSICAL FINDINGS.

Appearance unhealthy.....	19
Pallor.....	26
Emaciation.....	14
Adipose.....	13
Physical.....	8
Icteric.....	2
Prematurely aged.....	14
Loss of expression.....	5
Nephritic appearance.....	4

CHART V—Continued.

Scars on scalp.....	2
Tortuous temporals (marked).....	5
Marked varicosities on face.....	6
Edema of the lids.....	2
Scleral hemorrhage.....	1
Dilated pupils.....	3
Conjunctivitis (mild except one).....	11
Strabismus.....	1
Unequal pupils.....	4
Sluggish pupillary reflex.....	2
Argyll Robertson.....	3
Myopic (just by observation).....	8
Corneal scar.....	1
Blepharospasm.....	1
Exophthalmos.....	2
Good teeth.....	11
Loose teeth.....	32
Decayed teeth with tartar, etc.....	52
Pyorrhea.....	32
Coated tongue.....	19
Tongue tremor:	
Fine.....	56
Coarse.....	40
Arcus senilis.....	10
Laryngitis.....	9
Bad tonsils.....	5
Diminished hearing:	
Right ear.....	9
Left ear.....	11
Bifid uvula.....	1
Blue line on gums.....	5
Foul breath.....	5
Cervical adenopathy.....	12
Thyroid enlargement marked.....	22
Thorax:	
Pulmonary findings:	
Deformities of chest.....	4
Scoliosis.....	4
Abnormal dullness:	
Right apex.....	24
Left apex.....	21
Right posterior.....	12
Left posterior.....	9
Thorax:	
Pulmonary findings:	
Roughened respiration in apices.....	15
Abnormal bronchial breathing over all lungs.....	22
Rales in right apex.....	18
Rales in left apex.....	21
Rales under axillae.....	12
Friction rubs.....	8
Cavities diagnosed.....	2
Heart findings:	
Hypertrophy left or right or both.....	49
Accentuated aortic second.....	35
Mitral murmur systolic.....	7
Mitral murmur presystolic.....	1
Tricuspid systolic.....	3
Aortic diastolic.....	4
Rough first mitral.....	1
Pleuropericardial rub.....	1
Pulse:	
Tachycardia.....	10
Bradycardia.....	2
Irregular.....	2
Cyanosis.....	7
Marked evidence of arteriosclerosis.....	5
Abdomen:	
Epigastric tenderness.....	7
Appendicular tenderness.....	2
Gall-bladder tenderness.....	2
Liver enlargement.....	7
Right inguinal hernia.....	7
Left inguinal hernia.....	4
Bilateral inguinal hernia.....	3
Epigastric hernia.....	1
Umbilical hernia.....	1
Femoral hernia.....	1
Operation scars.....	5
Varicocele.....	1
Scars uncertain.....	1

CHART V—Concluded.

Urethral stricture	2
With active gonorrhea	4
Phimosis	4
Hydrocele	1
Hypospadias	1
One testicle	1
General adenopathy	2
Skin:	
Anasarca	2
Dryness	14
Dermatitis	5
Eczema	2
Acne	6
Ichthyosis	1
Dermographia	1
Gouty toe-joint	2
Edema ankles	6
Varicose veins	29
Syphilitic ulcer of leg	1
Varicose ulcer	1
Epitrochlear glands	3
Swollen right knee	2
Paralysis (peripheral neuritis) in arm	1
Sign of injury	1
Flat-foot marked	1
Clubbed nails marked	9
Tremor in hands	6
Patellar reflexes:	
Unequal	5
Exaggerated	26
Absent	3
Sluggish	2
Loss of orientation	1
Loss of expression	5
Subnormal mentality	1
General spasticity	1
Urine:	
Albumen	9
Sugar	4
Casts	16
Basophilic degenerated red cells	1
Hemoglobin estimate:	
100 per cent.	22
90-99 per cent.	64
85-89 per cent.	19
80-84 per cent.	29
70-79 per cent.	3
SYSTOLIC BLOOD-PRESSURE.	
Systolic blood-pressure, average:	
20 to 29 inclusive	132
30 to 39 inclusive	132
40 to 49 inclusive	143
50 to 59 inclusive	150
60 to 69 inclusive	187
70 and over	210
POSITIVE DIAGNOSIS MADE.	
Pulmonary tuberculosis (active)	26
Incipient or latent pulmonary tuberculosis	10
Chronic interstitial nephritis	15
Heart leakage	9
Diabetes	3
Exophthalmic goitre	1
Chronic nephritis	7
Epithelioma	1
Lead poisoning	3
Tabes dorsalis	2

DIVISION OF INDUSTRIAL COMMISSION.

CHARLES S. ANDRUS, *Chairman.*

PETER J. ANGSTEN,

ROBERT EADIE,

JAMES A. CULP,

OMER N. CUSTER, *Members.*

We beg to submit for your consideration the annual report of the Industrial Commission for the fiscal year ending June 30, 1921, together with statistical report for year ending December 31, 1920.

Usually reports of this nature are composed largely of statistical tables and figures. Yet the compilation of figures is a mere incident to the work, and from them alone it would be difficult to derive an accurate impression of the activities and important public service rendered by the Industrial Commission, both from a sociological and a judicial point of view.

For a true comprehension of the work of a commission of this nature, one must keep in mind that its functions are two-fold. It is a matter of common knowledge that, prior to the passage of the Compensation Law, a great volume of the work of the courts had to do with suits for damages for injuries sustained by employees in the course of their employment. Charities, both public and private, found their time and funds largely occupied in caring for workmen and their families during the long period of waiting, which the old-fashioned law suit entailed and the outcome of which was doubtful even under the most favorable circumstances.

The Compensation Act was enacted as remedial legislation, but overshadowing its legal aspect, it is based upon a humanitarian principle. To preserve that principle, the administration of the act must be humanitarian. At every point of contact which the commission has established between the employer and employee it has sought to foster a feeling of sympathy and conciliation, a spirit of kindness, which takes away from both parties that vindictive attitude which makes for endless litigation. In the pursuit of this object the commission has had, as a whole, the hearty cooperation of employers, employees and insurers.

The intention of the Compensation Law is that its provisions shall operate to a great extent automatically, and that in the event of injury, the employee shall receive the full benefits prescribed speedily and ungrudgingly, and that the interests of the parties, truly understood, are

not essentially antagonistic. As time goes on, this doctrine is becoming more and more understood in its practical application.

The success of the commission in familiarizing both employers and employees with their rights and causing them to take a proper attitude toward each other, cannot be better illustrated than by reciting the fact that during the last year over fifty thousand accidents were reported to the commission, while about twelve thousand claims were filed for arbitration: in other words, more than 75 per cent of the accidents have been adjusted without recourse to arbitration.

The increase in the work of the commission is made apparent by the fact that in the year 1915 there were 12,240 accidents reported, and during the past year 50,585 accidents were reported. This increase is at first sight appalling, but to a very considerable extent we think it is to be accounted for by the fact that the law is becoming better known and understood, and more generally observed, and that whereas in 1915 only a small fraction of the accidents were reported, at the present time nearly all industrial accidents are reported in the manner required by law.

In a very large proportion of the claims filed with the commission, the only dispute has been as to the nature and extent of physical disability and amount of compensation due, and, in fatal cases, the question of whether or not death was the result of an accidental injury. When such a dispute arises, an application for adjustment of claim is filed and a hearing had in the vicinity where the accident took place, before one of the arbitrators in the service of the commission. The award is entered in accordance with the evidence presented. About one-fifth of these cases are appealed for review to the commission itself.

The efforts of the commission have been taken up largely with the adjustment of these disputes. In this work the assistance of the **Medical Department** has been of incalculable value. A great number of cases, where the only dispute has been as to the nature and extent of disability, have been referred to the Medical Department, without cost to the parties, for examination and report. This has resulted in the certainty of an impartial examination, and saves to the litigants the expense of bringing in expert medical witnesses.

The present Compensation Act was passed in 1913. The amendments to the law, as prescribed at successive sessions of the legislature, have corrected manifest defects and widened its scope. The amendments made by the present legislature, effective July 1, 1921, are hereinafter discussed in detail.

We have endeavored in the last two years to cooperate closely in our work with the Widows' Pension Department of the Juvenile Court. There also has been a closer cooperation with the Bureau of Factory Inspection: the employment bureaus of the Department of Labor and the Insurance Department of the State.

During the past year we have checked practically all the insurance companies. We have looked over their files very carefully and ascertained if there were any discrepancies in their settlements and also to discover whether or not the proper amount of reserves are set up for the various injuries.

In the Statistical Department a close check is kept upon the accident reports and receipts filed. The employer is immediately notified if the basis of settlement in these receipts show a variation from the provisions of the Workmen's Compensation Act. The tables presented in this report have been compiled from the accident reports filed with this commission for the calendar year 1920.

These tables do not include the cases arising out of the polluted water, reported by the Chicago and Alton Railroad Company, of which there were 26 fatal and 153 non-fatal. Compensation in these cases amounted to about \$300,000 and medical expenses to the amount of \$10,289.84 have been paid.

Neither have we included in the tables of this report, the non-compensable accidents filed with the commission in compliance with the Supreme Court ruling of December 17, 1919, (No. 12835), which states that a claim for medical services is a claim for compensation, but where such claim has been acceded to and the payments for medical services have ceased, it will not support a proceeding for compensation more than two years later, although the full effect of the injury was not apparent until that time.

The total cases filed with the commission during the year, because of this ruling, amounted to 2,361, one of which was fatal. These injuries show a total healing period of 7,814 days and medical payments to the amount of \$3,242.

Heretofore, the amount of medical expenses shown in the tables of our annual report has been only that which was reported by insurance companies on cases of their assured, and was not representative of the amount actually expended in the State for this purpose. By information received in answer to a circular letter sent to the employer in the State carrying their own insurance, we are able, this year, to show additional medical expenses paid in the amount of \$577,335, bringing the total money paid for this item to \$1,309,246.

No material change has been made in the tables this year.

An additional extent of disability has been added, that of "Per Cent Loss of Use" as distinguished from "Specific Loss."

LIST OF TABLES FOR 1920.*

Table 1—Number of Fatal and Non-fatal Accidents Reported Classified as Closed and Pending. The amount of Compensation and Medical Paid and to be Paid.

These tables will be found in the separate report of the Department of Labor. They are omitted here for lack of space.

Table 2—Frequency of Accidents, by Industries. Extent of Disability and Compensation and Medical Costs.

Table 3—Compensation, Medical Cost, Extent of Disability with Average Period of Disability by Location of Injury.

Table 4—Nature or Injury, by Cause of Accident.

Table 5—Accidents, by Nature and Extent of Disability and Average Number of Days Lost.

Table 6—Sex and Wages of Injured.

Table 7—Showing, by Counties, Number of Accidents, Extent of Disability and Benefits Paid.

Table 8—Showing by Months, Number of Accidents and Extent of Disability.

Table 9—Sex and Age of Injured.

Table 10—All Fatal Cases by Division of Industry, Dependency and Total and Average Cost.

Table 11—Total and Average Cost by Extent of Disability.

Table number 1 of this report shows 50,585 reports of compensable accidents filed with this commission during the year 1920, 597 of which were fatal. This is an increase of 12,296 in the number of cases reported as compared with the year 1919 and notwithstanding the fact that the mines of the State were in operation on an average of only 159 days last year and the building trades were idle for long periods. It is discouraging to note that there was an increase of 62 fatal accidents in the year 1920.

The reason for this large increase is undoubtedly due to the fact that the employees of the State are more cognizant of their rights under the Workmen's Compensation Act and are seeing to it that their cases are brought to the attention of the commission either through attorneys or investigators appointed by organized labor.

Compensation payments during the year amounted to \$5,143,300, while the estimated amount due on cases which are still open in our files amounts to \$3,415,498. Medical and funeral expenses reported for the year total \$731,911.

Table number 2 shows by industry the number of accidents reported, compensation and medical costs, also the average cost per case in each of the industries. Little change is shown in this table from that of previous years. The mining of coal leads in the number of accidents reported and the amount of compensation paid. Metal products is second with machinery and instruments third.

Table number 3, shows compensation and medical costs and extent of disability, by location of injury. Also number of days required for the injury to heal sufficiently for the employee to return to work. There were more injuries reported to the upper extremities, and these also lead in the greatest number of days shown as healing period, and amount of compensation paid.

The total days lost to the industry last year because of injuries is shown to be 1,291,518. The largest average number of days lost was for injuries to the tibia and fibula and is 64.

Table number 4. As in former years, we have followed the general classification as to cause of accident. Falling objects caused the greatest

number of injuries and falls of persons second, with vehicles third. As to nature of injury, cuts, punctures and lacerations lead all others.

Table number 5 shows accidents by nature and extent of disability and the average number of days lost. Cuts, punctures and lacerations lead, with bruises, contusions and abrasions second and fractures third.

The greatest average number of days lost by an employee because of the nature of his injury were due to fractures, and this is shown to be 34.

Table number 6. This table shows that there were 1,930 females injured in the industries of the State during 1920 and that 792 of these were receiving between \$15 and \$20 per week as wages. A comparison of this table with that of 1919 shows that women's wages are on the increase as in that year the greatest number who were injured were receiving between \$10 and \$15 per week.

Of the 48,655 males injured in the State during 1920, 12,759 were receiving between \$20 and \$25 per week. This is the same rate as is shown in 1919 for the greatest number of injuries at any one rate.

The tables show that about 69 per cent of the persons injured in industry last year received the maximum amount of compensation payable for their respective injuries.

Table number 7. This table which groups by counties the number of accidents according to extent of disability, is similar to that of other years, as Cook County, including Chicago, leads all others with 25,541 accidents or 49 per cent of all that occurred in the State. St. Clair, Madison, Sangamon and Williamson Counties follow in the number of accidents reported in the order named.

The total cost of all injuries in Cook County amounts to \$4,250,153 or 45 per cent of that which was paid in the entire State.

Table number 8 shows by months, the number of accidents and extent of disability. Little variation is shown in the number reported for each month. August leads with 4,676, of which 64 were fatal. The number of accidents for winter months is shown to be larger than in previous years and probably can be accounted for by the mildness of our climate for this year.

Table number 9 shows that the greatest number of males injured in 1920 was between the ages of 26 and 30 years, while for females the greatest number was between 16 and 20.

Table number 10 shows by industry all fatal cases, the number and the nature of the dependents and the total amount of money paid in each industry. Also the average cost per case.

Of the 597 fatal cases there were 62 in which the deceased left no dependents. Medical and funeral expenses in these cases amounted to \$17,476.

Four hundred and twelve employees left persons who were totally dependent on them for support and the number of these dependents is

shown to be 1,027. One hundred and twenty-three left persons who were partially dependent and the number of these partial dependents is 177.

The total amount of compensation paid on fatal cases is \$483,006, while there remains to be paid \$1,254,548.

Table number 11 shows the total and average cost by extent of disability. The average cost of fatals per case was \$2,940, while that for permanent totals was \$9,500.

There are fewer permanent total disabilities shown in the report this year than in former ones for the reason that we have endeavored to tabulate only those in which there could never be a decrease of disability instead of all on which awards have been made.

COURT DECISIONS.

Since the publication of our last report one of the most important decisions made by the Supreme Court of the State of Illinois affecting the administration of the Workmen's Compensation Act was the case of *Illinois Publishing and Printing Company vs. Industrial Commission*, Supreme Court Docket No. 14012. This case extended the provisions of the act to a class of employees, thousands in number, not heretofore covered by the act. In the case in question, the Supreme Court held that where the business of the employer is extra-hazardous, all employees engaged in the business are entitled to the benefits of the act.

The Supreme Court also has, in numerous instances, extended the act to include certain extra-hazardous enterprises which are not specifically enumerated in section three; for instance, detective agencies were not anywhere mentioned in the act as being extra-hazardous enterprises. The Supreme Court has refused to issue a writ of error in cases where the detective agencies claimed that they were not directly and specifically included within the scope of section three. This action on the part of the Supreme Court in denying the writ of error in these cases had the effect of including detective agencies within the scope of the act.

An important construction has been placed on section nine of the Workmen's Compensation Act in the case of *Clark Co. vs. Industrial Commission*, 291 Ill. 561. This opinion held that compensation cannot be commuted to a lump sum for the express purpose of paying claims and debts.

An inherent defect existing in compensation cases arising whenever the question of extra-territorial jurisdiction is involved. The Illinois Supreme Court has held the place of injury governs and limits the jurisdiction of the Industrial Commission, so that the Compensation Act of this State can have no force outside the territorial limits of Illinois; that is, an employee injured in Indiana or Wisconsin would have to seek his remedy in the courts of those states. In other states, among them Indiana and Wisconsin, the jurisdiction depends on *lex*

loci contractus, or the legal residence of the employer or employee. Under the Wisconsin law for instance if a contract of employment is entered into in Illinois, the Wisconsin Commission refuses to take jurisdiction even though the accident might have happened within the borders of that state. On the other hand, the Industrial Commission of Illinois, in pursuance of the rule laid down by the Supreme Court, cannot, in such a case, take jurisdiction, because the injury occurred outside the territorial limits of Illinois. Thus we have a situation, which leaves an injured employee without an enforceable remedy, if the contract of employment was made in Illinois and he is injured in Wisconsin. This condition requires remedial legislation.

The act has been amended so as to include occupational diseases. By the terms of this amendment the disablement of an employee resulting from occupational disease is defined as the happening of an accidental injury within the terms and meaning of the Workmen's Compensation Act.

AMENDMENTS TO THE WORKMEN'S COMPENSATION ACT; IN EFFECT
JULY 1, 1921.

The first paragraph of section 3 now reads:

The provisions of this act hereinafter following shall apply automatically and without election to the State, county, city, town, township, incorporated village or school district, body politic or municipal corporation, and to all employers and all their employees, engaged in any department of the following enterprises or businesses, which are declared to be extra-hazardous, namely:

The enumeration is precisely the same as set out in the 1919 act.

The effect of this amendment is to bring all employees, who are engaged in enterprises, which are declared to be extra-hazardous under section 3, regardless of the kind of work that they may be doing at the time that they sustained accidental injuries arising out of and in the course of employment within the scope of the Workmen's Compensation Act.

Paragraph (a) of section 7 is amended by inserting in lieu of the word \$3,500.00, \$3,750.00.

Paragraphs (b) and (c) of this section are amended substantially in the same way, viz: that the maximum \$3,500.00 has been increased to \$3,750.00.

Paragraph (f) of section 7 under the 1919 act provided that in death cases compensation was payable in installments equal to one-half the average earnings of the employee. This has been changed. The paragraph now provides that all compensation shall be paid in installments equal to the percentage of the average earning as provided for in section 8 of the act.

The effect of this amendment is that the limitation as to the maximum amount is now applied in death cases where, as formerly there was no maximum as to the death cases, other than the provision that it should be 50 per cent of the weekly wages.

In Paragraph H of section 7, the minimum amount of compensation formerly provided where a widow survives was \$1,650.00. This has been increased to \$1,750.00 and \$100.00 additional for each child under sixteen years of age, where there are two or more children. The maximum amount of \$3,500.00 where a widow survives has been increased to \$3,750.00, and \$250.00 additional for each child under sixteen years of age, but in no event more than \$4,250.00.

In paragraph (b) of section 8, the minimum of \$7.00 has been changed to \$7.50 and the maximum has been changed from \$12.00 to \$14.00.

In paragraph (h) of section 8, the maximum amount of \$12.00 has been changed to \$14.00 per week.

In paragraph (j) of section 8, the minimum of \$7.00, \$8.00 in case an employee has one child under the age of sixteen years; \$9.00 in case the employee has two children under the age of sixteen years, and \$10.00 in case an employee has three or more children under the age of sixteen years, have been changed respectively to \$7.50, \$8.50, \$9.50 and \$10.50.

Sub-section 3 of paragraph (j) of section 8 has been changed by increasing the maximum of \$12.00 to \$14.00; \$13.00, in case the employee has one child, to \$15.00; \$14.00, in case the employee has two children under the age of sixteen years, to \$16.00; and \$15.00, in case the employee has three or more children, to \$17.00.

Section 12, which provided for physical examination and which had been construed by the Supreme Court in such a way to entitle an employee to insist upon a physical examination at the time of the hearing, has been limited to providing that such physical examination shall not be made on the day of the hearing.

Paragraph (e) of section 19 has been amended by inserting the following:

If a reporter does not, for any reason, furnish a transcript of the proceedings before the arbitrator in any case for use on a hearing for review before the Industrial Commission, within thirty days of the filing of the petition for review, the Industrial Commission may, in its discretion, order a trial *de novo* before the Industrial Commission in such case, upon application of either party.

Paragraph (1) of section 19 has been amended so as to give the Circuit Court the power to review all questions of law and fact provided that no additional evidence shall be heard in the Circuit Court, and the findings of fact made by the commission shall not be set aside unless contrary to the manifest weight of the evidence.

Section 19 (f) was amended to read:

In its decision on review, the Industrial Commission shall determine in each particular case the amount of the probable cost of the record to be filed as a return to the writ of certiorari in that case, and no praecipe for a writ of certiorari may be filed and no writ of certiorari shall issue unless the party seeking to review the decision of the Industrial Commission shall exhibit to the clerk of the said Circuit Court a receipt showing payment of the sums so determined to the secretary of the Industrial Commission.

Attention is also directed to the amendment of section 15 of "An Act to promote public health by protecting certain employees in this State from the dangers of occupational diseases and providing for the enforcement thereof."

This amendment provides that the disablement of an employee engaged in occupations covered by section 2 of an "An Act to promote the public health by protecting certain employees from the dangers of occupational diseases" shall be treated as the happening of an accidental injury within the terms and meaning of the Workmen's Compensation Act. The term "disablement" means the state of being disabled from earning full wages at the work at which the employee was last employed by the employer from whom he claims compensation.

The occupations covered by section 2 of the Occupational Disease Act reads as follows:

Every employer in this State engaged in the carrying on of any process of manufactures or labor in which sugar of lead, white lead, lead chromate, litharge, red lead, arsenate of lead or paris green are employed, used or handled, or the manufacture of brass or the smelting of lead or zinc, which processes and employment are hereby declared to be especially dangerous to the health of the

employees engaged in any process of manufacture or labor in which poisonous chemicals, minerals or other substances are used or handled by the employees therein in harmful quantities or under harmful conditions, shall provide for and place at the disposal of the employees engaged in any such process of manufacture and shall maintain in good condition and without cost to the employees, proper working clothing to be kept and used exclusively for such employees while at work, and all employees therein shall be required at all times while they are at work to use and wear such clothing; and in all processes of manufacture or labor referred to in this section which are unnecessarily productive of noxious or poisonous dusts, adequate and approved respirators shall be furnished and maintained by the employer and in good condition and without cost to the employees, and such employees shall use such respirators at all times while engaged in any work necessarily productive of noxious or poisonous dusts.

Senate Bill 786 further provides that if any employee in occupations covered by section 2 of this act, is disabled or dies and his disability or death is caused by a disease arising out of the occupations referred to in section 2 of this act, which disease arises out of and in the course of his employment, he or his dependents shall be entitled to compensation for his death or for the duration of his disability in accordance with the provisions of the Workmen's Compensation Act.

DEPARTMENT OF MEDIATION AND CONCILIATION.

On June 1, 1920, the mediators were notified of a strike of telephone operators and line men at the cities of Herrin, West Frankfort, Johnson City, Benton and Marion, Illinois. Conferences were held with both parties and an agreement reached that emergency service calls, viz., fire, police and ambulance, would be taken care of. A definite settlement of the strike was made on August 25, 1920.

On July 6, 1920, the mediators were notified of a threatened strike of machinists, moulders and laborers at Kewanee, Illinois, arising out of a misunderstanding of an agreement reached after a previous strike. A conference with both parties resulted in an amicable adjustment.

On July 15, 1920, a strike was called of the substation men at Chicago, and after being out a few hours, the matter was settled.

August 12, 1920, employees of the Street Car Company at Streator, Illinois, went on strike after a controversy concerning wages. The mediators held a conference with each of the parties, but a compromise settlement offered by the company was voted down by the employees. On August 27, 1920, another attempt was made to effect a settlement, but without result. On September 7, 1920, a satisfactory compromise was reached, the employees receiving a 7 per cent increase in wages.

On August 17, 1920, a strike was called of the garment workers at Coal City, Illinois, over wages. The mediators obtained an offer of settlement from the employer, which was voted down at a meeting of the employees. Further conferences were held by the mediators with the parties on October 5, 6 and 7, 1920, and also on October 11, 1920. A satisfactory agreement was reached and the employees returned to work.

On September 18, 1920, a strike of meat cutters was declared at the plant of S. Oppenheimer & Co., Chicago, which was settled on the same day.

On September 21, 1920, the mediators were informed of a strike of spar miners at Rosiclare, Illinois, involving wages and recognition of the organization of the mine operators. After a number of conferences with both sides, the mediators reached the conclusion that a continuation of the strike by the miners was hopeless and advised them to accept the proposition offered by the operators and return to work. A referendum vote was then taken, resulting in a continuation of the strike. On March 1, 1921, the mediators were again called to Rosiclare, upon information that shooting and mob violence were being indulged in, in connection with the strike. The mediators made as thorough an investigation as possible, in conjunction with the county and city authorities, but without obtaining any definite evidence as to the guilty parties. Another attempt also was made to settle the strike.

On November 30, 1920, the mediators were called to Peoria, Illinois, in connection with a controversy between the interurban traction system and its employees. On December 1, 1920, a satisfactory agreement was reached.

On December 6, 1920, a strike of meat cutters on the north side, Chicago, was declared. The mediators were notified, and after a joint conference with both sides, a settlement was negotiated.

On February 8, 1921, the mediators received information of a contemplated strike of the Yard Men's Association of Chicago, and after conference with the representatives of the association, the threatened strike was averted.

On February 11, 1921, the mediators were called to Rockford, Illinois, in connection with a controversy with the linemen employed by the traction system, but no adjustment could be obtained.

On March 16, 1921, the mediators were informed of a threatened strike of street car employees at Rock Island, Moline and Davenport, Iowa. A conference was had at Rock Island with representatives of the street car employees' organizations, and on the following day with the street car company's officials. The mediators then decided that the controversy was one over which the State Arbitration Board of Iowa alone had jurisdiction, and the matter was then referred to it for adjustment.

On March 16, 1921, the mediators were directed to go to Washington, D. C., in connection with an investigation conducted by United States Director of Labor Davis in regard to wages in the meat packing industry. The matter was finally referred to Judge Alschuler of Illinois, as arbitrator, and an adjustment made.

On April 29, 1921, the mediators were called to Rockford, Illinois, in connection with labor trouble with the building trades, and an effort

was made to have the parties submit their differences to the Industrial Commission for arbitration, but without result. On May 18, 1921, an effort was again made, to which the employees agreed, but the employers declined to submit the matter to arbitration.

On May 2, 1921, a strike of stock handlers, at Chicago, was declared, and a settlement was reached on May 5, 1921.

On May 3, 1921, a strike was threatened by the Typographical Union, Chicago, concerning a proposed reduction in wage scale. The controversy was finally referred to arbitration, which is still pending.

ARBITRATIONS.

July 1, 1920, to June 30, 1921.

	Number of arbitrations filed July 1, 1920, to June 30, 1921.....	12,029
(1)	Number of cases in which compensation for temporary total disability only was awarded.....	862
(2)	Number of cases in which compensation under paragraphs (c), (d), (e) and (f) of Section 8, by only (specific loss, disfigurement, loss use, etc.), awarded.....	830
(3)	Number of cases in which compensation for temporary total disability and under paragraphs (c), (d), (e) and (f) of Section 8, both awarded.....	2,578
(4)	Number of cases in which compensation for death only awarded.....	507
	Total cases in which compensation awarded.....	4,533
	Amount of compensation awarded Class 1 (see above).....	\$ 232,870.89
	Amount of compensation awarded Class 2 (see above).....	631,194.06
	Amount of compensation awarded Class 3 (see above):	
	(a) Temporary total.....	\$ 508,904.03
	(b) Other than temporary total.....	1,493,896.93
	Total Class 3.....	\$2,002,800.96
	Amount of compensation awarded Class 4 (see above).....	\$1,668,609.45
	Total compensation awarded all classes.....	4,535,475.56
	LUMP SUMS.	
	Total lump sums filed July 1, 1920, to June 30, 1921.....	2,299
	Number non-fatal cases in which lump sums awarded.....	1,702
	Number fatal cases in which lump sums awarded.....	369
	Total cases in which lump sums granted.....	2,071
	Number lump sums rejected.....	139
	Amount of compensation granted in lump sums (non-fatal).....	\$1,294,699.27
	Amount of compensation granted in lump sums (fatal).....	767,487.88
	Total compensation granted in lump sums.....	\$2,061,829.15
	Grand total compensation paid.....	\$6,597,304.71

Report of
THE DEPARTMENT OF MINES AND
MINERALS

July 1, 1920 to June 30, 1921

STATE OF ILLINOIS.
THE DEPARTMENT OF MINES AND MINERALS.

ROBERT M. MEDILL, *Director.*
MARTIN BOLT, *Assistant Director.*

STATE MINING BOARD.
JAMES NEEDHAM, Chicago; PETER JOYCE, Springfield; M. S. COLEMAN,
Harrisburg; WILLIAM HUTTON, DuQuoin.

MINERS' EXAMINATION BOARD.
WILLIAM HALL, Springfield; JOSEPH C. VIANO, Coal City; JOHN
MULLIGAN, Decatur; WILLIAM HOGAN, Ziegler.

STATE MINE INSPECTORS.
WALTER A. WAITE, Springvalley; WILLIAM E. KIDD, Peoria; JAMES
R. RICHARDS, Belleville; THOMAS P. BACK, Canton; JOHN
O'ROURKE, West Frankfort; RICHARD NEESON, Springfield; JO-
SEPH HASKINS, Catlin; JOHN G. MILLHOUSE, Litchfield; F. J.
DEVLIN, Springfield; HENRY D. THOMPSON, Collinsville; FRANK
ROSBOTTOM, DuQuoin; THOMAS ENGLISH, Harrisburg; W. L.
MORGAN, Greenville.

SPECIAL INVESTIGATOR.
JAMES A. ANDERSON, Farmington.

MINE RESCUE SUPERINTENDENTS.
THOMAS ROGERS, Herrin; JAMES WEIR, Benton; JAMES ROBERTSON,
DuQuoin; FRANK PATTERSON, Harrisburg; ALEXANDER SKELTON,
LaSalle; JAMES CLUSKER, Springfield.

DEPARTMENT OF MINES AND MINERALS.

ROBERT M. MEDILL, *Director.*

Following this report will be found a brief report of the divisions making up this department. They are brief because the detailed report is printed in the Annual Report of the department and bound in one volume to save expense in printing and distributing same.

On July 23, 1920, Robert M. Medill was appointed director of the department, to succeed Joseph C. Thompson, who died on April 12, 1920. Mr. Medill, previous to his appointment, had many years of experience as superintendent of mines in the coal fields of southern Illinois.

DUTIES OF THE DEPARTMENT.

The specific duties of the Department of Mines and Minerals have been outlined in previous reports of the department, and have to do with improving the mining conditions throughout the State.

In the three years past a consistent effort has been maintained to improve the conditions in the mines, and to prevent as many of the ills with which mining is surrounded, as possible.

The mine inspectors in making inspections have been instructed to do constructive, as well as corrective work. In fact, the principle of constructive work not only has been insisted upon, but has been made the motto of the entire department.

Every complaint coming to this department is considered and in most cases an investigation is made to discover its cause and recommendations made to correct and eliminate as far as possible, the reason for such complaints.

It has been found that a quarterly meeting of the mine inspectors and the superintendents of the Mine Rescue Stations has been a very great help to both divisions. It has brought out a splendid spirit of cooperation and there is a harmony of purpose which is to be commended.

FEDERAL BUREAU OF MINES.

During the year covered by this report the Department of Mines and Minerals has been in complete cooperation with the Federal Bureau of Mines, which has given the department very valuable assistance in the training of men in first aid and mine rescue work. It is a noticeable fact that more men are taking an interest in this work at present than ever before.

It has been demonstrated repeatedly that the value of mine rescue work cannot be estimated and should be encouraged in every possible way.

The results that have been accomplished by the Department of Mines and Minerals have been possible by the cooperation of all divisions with the director.

DIVISION OF MINE RESCUE AND FIRST AID.

MARTIN BOLT, Assistant Director.

The following is the fourth annual report of the Division of Mine Rescue and First Aid, and is for the year ending June 30, 1921.

FIRES AND EXPLOSIONS.

Farmington, Illinois, July 25, 1920—Department called to Maplewood Colliery Company's mine to get pumps started and save the mine from being flooded.

Centralia, Illinois, February 23, 1921—Explosion at Centralia Coal Company's mine. Department aided in the recovery of mine.

Dowell, Illinois, March 17, 1921—Department called to aid in the re-opening of the Union Colliery Company's mine, Kathleen.

Granville, Illinois, June 10, 1921—Department called to St. Paul Coal Company's mine, extinguished fire.

Tonica, Illinois, June 12, 1921—Took pulmotor to try to revive boy drowned, but was unsuccessful.

Springfield Station.

December 23, 1920, the team was called to Auburn, Illinois, Springfield District Coal Mining Company's No. 54 mine, where they rescued a miner who had lost his way and had been overcome by black-damp.

Centralia, Illinois, February 23, 1921, the team went to the Centralia Coal Company's mine and assisted in recovering the bodies of men who lost their lives at this explosion.

March 16 to 30, 1921—Assisted in the recovery of the Union Colliery Company's Kathleen mine at Dowell.

Herrin Station.

July 28, 1920—Opened seals at Peabody Coal Company's No. 18 mine.

August 8, 1920—Opened seals at Peabody Coal Company's No. 18 mine.

September 17, 1920—Fire at C. W. & F. Coal Company's mine B.

September 18, 1920—Call for pulmotor to C. W. & F. Coal Company's mine B.

November 30, 1920—Opened seal at mine B, C. W. & F. Coal Company's mine.

June 17, 1921—Call to fire at C. W. & F. Coal Company's mine B.

DuQuoin Station.

Called to mine No. 18 at West Frankfort By-Products Coal Company's mine to aid in fire at mine.

November 2, 1920—Jackson Coal Company's mine at Hallidayboro to aid in fighting fire.

February 23, 1921—Called to mine fire at Kathleen mine, Dowell.

February 24, 1921—Called to Centralia Coal Company's mine, Centralia, to aid in recovery of bodies after mine explosion.

March 17, 1921—Called to Kathleen mine at Dowell to open up seal. Remained there until March 29, 1921.

Benton Station.

July 24, 1920—Called to By-Products Coal Company's mine to fight fire and seal off mine.

July 28, 1920—Explored section that had been sealed off. Conditions were such that the mine was resealed. This was at No. 18 mine, By-Products Coal Company.

August 3, 1920—Called to By-Products Coal Company's mine to reopen seals, but after working all day, fire broke out again and it was resealed.

October 8, 1920—Explosion occurred at By-Products No. 18 mine.

February 23, 1921—Union Colliery Company, Dowell mine, was sealed.

February 24, 1921—Centralia Coal Company, Centralia, explosion.

Harrisburg Station.

August 2, 1920—Called to West Frankfort to fight fire at No. 18 mine.

October 5, 1920—Called to Wasson No. 2 mine, Carrier Mills, where man had been electrocuted.

October 8, 1920—Called to Norris City, Illinois, to fight fire.

March 16, 1921—Called to Union Colliery Company's mine, Dowell, to aid in reopening mine.

CERTIFICATES.

During the year, 1,566 certificates have been issued as follows:

One thousand sixty-two first aid certificates to miners, 55 to women, girls and boys completing the first aid course.

Twenty-eight badges were given to boys under 16 years of age.

Four hundred forty-nine certificates have been given to miners completing the mine rescue work.

The list below gives the Mine Rescue Stations maintained by the State and shows the location and name of the superintendent in charge of each:

Location.	Superintendent.
LaSalle	Alex Skelton
Springfield	James Clusker
Benton	James Weir
Herrin	Thomas Rogers
DuQuoin	James Robertson
Harrisburg	Frank Patterson

At each of the Mine Rescue Stations there is a team consisting of five men who train at regular intervals so that they will be in condition to render good service and will keep in touch with the mechanical parts of the apparatus.

It is very essential that persons wearing mine rescue apparatus should be physically fit and should be well acquainted with the mechanism of the apparatus; hence, the necessity for constant practice and study. The progress made during the year has been very gratifying to all who are interested in this line of work.

A large number of the larger coal companies have equipped stations and are training their own men under the direction of safety inspectors. This line of work has a tendency to make men more careful and enables them to render real service when their fellow workers are injured, and also to decrease the number of accidents in the mines.

The Federal Bureau of Mines has cooperated with the Department of Mines and Minerals in training men in mine rescue and first aid work by sending cars equipped for this work wherever the employees of any coal company evidence a desire for training. During a part of the time there were two Federal cars in the State.

The State first aid contest was held at Peoria and twenty teams from all parts of the State took part. The three teams making the best rating were sent to the national contest at Denver, Colorado, and in addition to these teams, a number of teams representing various coal companies from Illinois took part and made a very creditable showing.

Much interest is being manifested in mine rescue and first aid work and a number of teams have been organized during the year. The Division of Mine Rescue and First Aid has received a great many calls for assistance in organizing and training classes.

We received reports frequently of persons being injured in mines who are given first aid at the time of accident by some person who has been trained in this work by some one in the employ of the Department of Mines and Minerals or the Federal Bureau of Mines.

The effort put forth in this work brings results and is the means of relieving much pain and suffering to those who are injured in the mines. Persons who give their time in preparing themselves for this service should be commended and the work encouraged.

DIVISION OF INSPECTION.

The State is divided into twelve inspection districts, and there is one inspector for each district with one additional inspector who assists in making special investigations and acts in the case of sickness or absence of any regular inspector.

The detailed report of the work of this division is contained in the annual report of the department and shows the production of each mine in the State, together with much other valuable information.

The following is taken from the records of the general office, and will show briefly the work done by the State Mine Inspectors during the year:

Number of inspection of mines	1,553
Number of days worked inspecting mines	1,141
Number of days worked at other duties, such as investigating accidents, testing scales, investigating complaints, office work and other miscellaneous services	887
Total days worked	3,381

The following table gives a summary of the specific work done by the State Inspectors during the year, and shows what per cent of the time was spent in the various duties of their office as well as the number of days worked:

SUMMARY OF SPECIFIC WORK REPORT FOR YEAR ENDED JUNE 30, 1921.

District.	Inspecting mines.						Other classified duties—days worked.						Miscellaneous services.		Total days.	
	Shipping.		Local.		Total.		Investigating accidents.	Testing scales.	Investigating complaints.	Office work.	Travelling.	Total days in other classified duties.	Per cent of time in other class- ified duties.	Days worked.		Per cent of time.
	Number inspected.	Days worked.	Number inspected.	Days worked.	Number inspected.	Days worked.										
First.....	49	79	47	47	96	126	6	3	10	28	41	87	31.8	61	22.2	274
Second.....	98	108	23	19	121	127	6	4	14	31	6	61	22.7	82	30.1	269
Third.....	119	119	150	47	269	166	6	5	8	13	4	43	16.1	59	22.0	268
Fourth.....	113	173	66	50	179	223	7	18	29	7	1	62	21.0	11	3.7	296
Fifth.....	92	110	34	28	126	138	4	4	4	25	23	69	22.7	97	31.9	304
Sixth.....	67	134	15	8	82	142	17	9	34	23	8	91	33.1	42	15.3	276
Seventh.....	58	80	14	9	72	89	17	9	56	51	10	143	48.8	61	20.8	293
Eighth.....	96	96			96	96	4	42	66	53		165	55.0	40	13.3	300
Ninth.....	103	115			103	115	8	13	29	16	35	101	34.9	73	25.3	289
Tenth.....	60	119	1	1	61	120	13	16	53	6	23	110	40.6	41	15.1	271
Eleventh.....	60	82	20	10	80	92	19	16	24	20	19	98	36.0	90	32.1	280
Twelfth.....	98	119	3	1	101	120	18	21	13	35	24	111	42.4	31	11.8	262
Total.....	1,012	1,333	383	220	1,395	1,553	136	162	341	308	194	1,141	33.8	687	20.3	3,381

DIVISION OF MINERS' EXAMINATION.

WILLIAM HALL, *President*,
WILLIAM TURNER,
JOSEPH C. VIANO,
WILLIAM HOGAN.

The following statement will show the large amount of work done by the Miners' Examining Board and the amount of funds collected by the board during the year ending June 30, 1921.

During the year, four certificates were cancelled for the reason that upon investigation it was proven beyond doubt the men had not served sufficient time at the face to enable them to retain their certificates.

Officers of the miners' local unions and coal companies should exercise the greatest care in giving recommendations to individuals seeking certificates.

Examinations have been held as follows:

Date.	Place of meeting.	Number of applicants.	Certificates issued.	Number rejected.	Revenue collected.
1920					
July	6 Herrin.....	75	66	9	\$132 00
	7 Benton.....	84	69	15	138 00
	8 Harrisburg.....	23	19	4	38 00
	9 DuQuoin.....	58	41	17	82 00
	10 Centralia.....	19	18	1	36 00
	12 Collinsville.....	39	39	-----	78 00
	13 Staunton.....	34	22	12	44 00
	14 Springfield.....	85	59	26	118 00
	16 Pana.....	45	36	9	72 00
	17 Danville.....	27	21	6	42 00
	19 Canton.....	54	43	11	86 00
	20 Peoria.....	9	7	2	14 00
Aug.	3 DuQuoin.....	29	23	6	46 00
	4 Marion.....	59	55	4	110 00
	5 West Frankfort.....	36	29	7	58 00
	6 Sesser.....	28	23	5	46 00
	7 Harrisburg.....	44	36	8	72 00
	9 Belleville.....	58	56	2	112 00
	10 Staunton.....	31	27	4	54 00
	11 Springfield.....	60	52	8	104 00
	13 Pana.....	11	10	1	20 00
	14 Danville.....	12	11	1	22 00
	16 LaSalle.....	20	15	5	30 00
	17 Peoria.....	31	30	1	60 00
Sept.	8 DuQuoin.....	13	13	-----	26 00
	9 Herrin.....	47	35	12	70 00
	10 Benton.....	14	12	2	24 00
	11 Harrisburg.....	37	35	2	70 00
	17 Collinsville.....	42	38	4	76 00
	18 Staunton.....	54	41	13	82 00
	20 Springfield.....	102	82	20	164 00
	21 Pana.....	19	12	7	24 00
	22 Danville.....	38	26	12	52 00
	23 Peoria.....	26	16	10	32 00
	24 Canton.....	28	24	4	48 00
	25 Rushville.....	30	30	-----	60 00

DIVISION OF MINERS' EXAMINATION.

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Date.	Place of meeting.	Number of applicants.	Certificates issued.	Number rejected.	Revenue collected.
1920					
Oct.	5 DuQuoin.....	129	118	11	\$ 236 00
	6 Herrin.....	186	167	19	334 00
	7 West Frankfort.....	130	103	27	206 00
	8 Harrisburg.....	108	97	11	194 00
	9 Belleville.....	121	114	7	228 00
	11 Staunton.....	58	50	8	100 00
	12 Springfield.....	79	55	24	110 00
	13 Taylorville.....	34	28	6	56 00
	14 Danville.....	32	23	9	46 00
	15 LaSalle.....	41	34	7	68 00
	16 Peoria.....	59	46	13	92 00
	18 Galesburg.....	25	25		50 00
	23 Gardner.....	25	25		50 00
Nov.	8 Centralia.....	29	28	1	56 00
	9 DuQuoin.....	83	65	18	130 00
	10 Benton.....	164	147	17	294 00
	11 Harrisburg.....	88	83	5	166 00
	12 Marion.....	132	115	17	230 00
	13 Percy.....	59	52	7	104 00
	15 Collinsville.....	74	63	11	126 00
	16 Staunton.....	90	63	27	126 00
	17 Danville.....	39	25	14	50 00
	18 Canton.....	56	32	24	64 00
	19 Peoria.....	53	43	10	86 00
	22 Springfield.....	153	125	28	250 00
Dec.	6 Harrisburg.....	41	30	11	60 00
	7 Herrin.....	148	135	13	270 00
	8 West Frankfort.....	163	134	29	268 00
	9 Ziegler.....	129	109	20	218 00
	10 DuQuoin.....	80	76	4	152 00
	10 Sparta.....	65	65		130 00
	11 Belleville.....	93	86	7	172 00
	16 Staunton.....	89	65	24	150 00
	17 Auburn.....	58	50	8	100 00
	18 Springfield.....	103	82	21	164 00
	20 Danville.....	35	22	13	44 00
	21 LaSalle.....	76	64	12	128 00
	22 Peoria.....	61	47	14	94 00
1921					
Jan.	5 Harrisburg.....	91	80	11	160 00
	6 Herrin.....	148	122	26	244 00
	7 West Frankfort.....	107	91	16	182 00
	8 DuQuoin.....	84	67	17	134 00
	10 Collinsville.....	85	76	9	152 00
	11 Staunton.....	57	46	11	92 00
	12 Auburn.....	34	30	4	60 00
	13 Springfield.....	74	57	17	114 00
	15 Pana.....	55	46	9	92 00
	17 Danville.....	39	32	7	64 00
	18 Canton.....	58	53	5	106 00
	19 Peoria.....	35	28	7	56 00
Feb.	2 Harrisburg.....	107	94	13	188 00
	2 Percy.....	25	24	1	48 00
	3 Marion.....	131	116	15	232 00
	4 West Frankfort.....	127	113	14	226 00
	5 DuQuoin.....	119	99	20	198 00
	7 Belleville.....	76	64	12	128 00
	8 Staunton.....	53	48	5	96 00
	9 Carlinville.....	26	25	1	50 00
	10 Springfield.....	86	72	14	144 00
	12 Taylorville.....	60	38	22	76 00
	14 Danville.....	23	18	5	36 00
	15 Peoria.....	59	51	8	102 00
	16 LaSalle.....	43	37	6	74 00
Mar.	8 Harrisburg.....	100	89	11	178 00
	9 Herrin.....	164	146	18	292 00
	10 Benton.....	136	112	24	224 00
	11 DuQuoin.....	85	63	22	126 00
	12 Collinsville.....	53	48	5	96 00
	14 Staunton.....	60	38	22	76 00
	15 Auburn.....	46	39	7	78 00
	16 Springfield.....	64	44	20	88 00
	21 Canton.....	17	15	2	30 00
	22 Galesburg.....	7	7		14 00
	23 Peoria.....	18	16	2	32 00
	24 Danville.....	16	16		32 00

Date.	Place of meeting.	Number of applicants.	Certificates issued.	Number rejected.	Revenue collected.	
1921						
Apr.	5 Harrisburg.....	44	35	9	\$ 70 00	
	6 Johnston City.....	86	74	12	148 00	
	7 Ziegler.....	83	57	26	114 00	
	8 DuQuoin.....	52	46	6	92 00	
	9 Centralia.....	21	20	1	40 00	
	11 Belleville.....	57	53	4	106 00	
	12 Staunton.....	30	26	4	52 00	
	13 Springfield.....	63	56	7	112 00	
	15 Pana.....	22	20	2	40 00	
	16 Danville.....	16	11	5	22 00	
	21 Peoria.....	36	26	10	52 00	
	22 LaSalle.....	57	50	7	100 00	
May	2 Collinsville.....	21	17	4	34 00	
	3 Harrisburg.....	41	34	7	68 00	
	4 Herrin.....	124	107	17	114 00	
	5 West Frankfort.....	93	67	26	134 00	
	6 DuQuoin.....	109	93	16	186 00	
	7 Staunton.....	41	34	7	68 00	
	9 Carlinville.....	30	24	6	48 00	
	10 Springfield.....	35	26	9	52 00	
	12 Taylorville.....	13	11	2	22 00	
	13 Danville.....	11	5	6	10 00	
	20 Peoria.....	21	18	3	36 00	
	21 Canton.....	26	26		52 00	
June	17 Coal City.....	5	5		10 00	
	6 Belleville.....	46	43	3	86 00	
	7 Harrisburg.....	52	47	5	94 00	
	8 Herrin.....	256	244	12	488 00	
	9 Benton.....	129	110	19	220 00	
	10 DuQuoin.....	119	98	21	196 00	
	11 Staunton.....	50	39	11	78 00	
	13 Virden.....	28	27	1	54 00	
	14 Springfield.....	39	33	6	66 00	
	15 Pana.....	18	16	2	32 00	
	16 Danville.....	26	15	11	30 00	
	17 Peoria.....	18	18		36 00	
18 LaSalle.....	31	29	2	58 00		
28 Coal City.....	3	3		6 00		
		9,129	7,635	1,494	\$15,270 00	
Total number of candidates examined.....						9,129
Total number of candidates rejected.....						1,494
Total number of certificates issued.....						7,635
Revenue collected.....						\$15,270
Rejections classified as follows:						
Lack of evidence.....						949
Lack of English language.....						257
Lack of experience.....						141
Less than 2 years at face.....						100
No knowledge of mining laws.....						37
Total rejections.....						1,494
Number of men claiming to have lost certificates by fire, theft, etc.....						452
Number of certificates issued to miners' sons, under 21 years of age.....						740

DIVISION OF ECONOMIC INVESTIGATION.

JAMES TAYLOR, *Investigator.*

The general report of the Division of Economic Investigation is contained in the annual report of the department. The work done covers the investigation of all mineral production other than coal and the inspection of the same.

During the year ending June 30, 1921, special blanks have been arranged and a complete report of each inspection is sent to the general office. These reports are filed and the recommendations made by the investigator are called to the attention of the superintendent or general manager. By so doing we are able to bring about safer working conditions in these mines.

There are a large number of these openings throughout the State and we have attempted to visit and secure reports for all of them. The detailed information is contained in the annual report and this plan will be followed in the future, so that all reports will be included in the same volume, and thereby reduce the expense for printing.

The Fifty-second General Assembly enacted a law providing for a State Mine Inspector, whose duty it will be to inspect metal mines. This law is effective January 1, 1922.

The investigations conducted by this division have covered all classes of minerals other than coal. From information contained in the detailed report of the Division of Economic Investigation, 70 per cent of the counties produce oil, gas or minerals of some kind.

Report of
THE DEPARTMENT OF PUBLIC WORKS
AND BUILDINGS

From July 1, 1920 to June 30, 1921

STATE OF ILLINOIS.
THE DEPARTMENT OF PUBLIC WORKS AND BUILDINGS.

CORNELIUS R. MILLER, *Director.*
DON GARRISON, *Assistant Director.*

ADVISORY BOARDS.

CENTENNIAL BUILDING COMMISSION.

LEN SMALL. LOUIS L. EMMERSON. DAVID E. SHANAHAN.
THOMAS RINAKER. EDWARD W. PAYNE. W. B. MCHENRY.
FRED E. STERLING.

HIGHWAY ADVISORY BOARD.

RICHARD R. MEENTS, A. R. HALL. J. M. PAGE.
Chairman. CHARLES M. HAYES. F. R. WOELFLE.

BOARD OF WATER RESOURCE ADVISORS.

E. S. CONWAY. JOY MORTON. CHARLES B. FOX.
GEORGE T. PAGE.

BOARD OF ART ADVISORS.

HUGH S. MAGILL. LORADO TAFT. G. CLEVE CHURCHMAN.
FREDERIC C. BARTLETT. MARTIN A. RYERSON.

BOARD OF PARKS AND BUILDINGS ADVISORS.

C. L. HUTCHINSON. FRANK E. DAVIDSON. GEORGE W. MAHER.
JULIUS HAGELER. S. R. LEWIS.

DIVISIONS.

HIGHWAYS.

FRANK T. SHEETS, *Superintendent of Highways.*
CLIFFORD OLDER, *Chief Highway Engineer.*

ARCHITECTURE AND ENGINEERING.

EDGAR MARTIN, *Supervising Architect.*

WATERWAYS.

WILLIAM L. SACKETT, *Superintendent.*

PRINTING.

H. L. WILLIAMSON, *Superintendent.*

PURCHASES AND SUPPLIES.

H. H. KOHN, *Superintendent.*

PARKS.

JOHN G. BOYLE, *Superintendent.*

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS.

CORNELIUS R. MILLER, *Director.*

The Department of Public Works and Buildings with its six divisions, Architecture and Engineering, Highways, Parks, Printing, Purchases and Supplies and Waterways, has aptly been termed the constructive division of State Government.

In it are centered practically all of the commercial and constructive activities of the State. Under its direction are being developed those two great Illinois projects, the building of the State's sixty million dollar hard road system and the twenty million dollar deep waterway, which will ultimately give practical water transportation from the Great Lakes to the Gulf.

To summarize briefly the activities of this great department are of unusual importance. Appended are the records and reports of the respective division superintendents to which reference should be made for a comprehensive viewpoint of the department's work.

Greatest public interest undoubtedly centers on the Division of Highways because to this division has been intrusted the building of the State's hard road system. Just in passing, let the record of this department for the first twelve months of Governor's Small's administration write these facts:

1. Under the general direction of the Governor, for he has taken a personal and active interest in the pushing of the State's road building program, the division succeeded in breaking all American road building records.

2. Following the policy of the Governor and of the division to secure a dollar's worth of road for every dollar spent the average cost of eighteen-foot concrete pavement was reduced from \$40,000 per mile to \$28,000 per mile.

3. During the year contracts were let for 704 miles of pavement, a greater mileage than that let by any other state in the same period of time.

4. During the construction season of 1921 the State actually completed 405 miles of standard concrete road, breaking all records for road building in this State and exceeding the mileage completed during the year by any other state.

5. Thus Illinois during the year built a greater mileage, let more contracts, and, specifications being alike, built its roads at a lower average cost per mile than any other American commonwealth.

When Governor Small entered office he interested himself first in the pushing of the State's hard road construction program. On February 18, 1921, bids were opened for an extensive mileage. Prices asked by the competing bidders averaged between \$39,000 and \$40,000 per mile, including the average amount of grading, culvert and bridge work. The Governor and the Director of the Department ordered all bids rejected and the Governor in a public statement declared that the price was unfair and inexcusably exorbitant. He said, "I want to push the road building program with all possible speed, but I will not build a mile of road until equitable prices are offered. I do not believe that the Illinois farmer wants to exchange one hundred thousand bushels of corn for one mile of road."

He told the contractors and material producers that there would be no more contract letting in Illinois until a fair cost basis had been established, and he gave expression to his determination not to build any more roads in this State until the cost had been reduced to at least a maximum of \$30,000 per mile.

This determination provoked a storm of criticism by the cement producers and paid press agents started a campaign of publicity throughout the State demanding that Illinois build its roads "at once, regardless of cost." His policy, however, was adhered to by the Division of Highways. Its soundness has been demonstrated by the fact, that in subsequent lettings throughout the year 704 miles of concrete pavement contracts were awarded well within the limits of \$30,000. As a matter of fact, the average cost for all eighteen-foot Portland cement concrete pavements awarded directly by the State during the year 1921 averaged but \$28,553 per mile. There was, too, a corresponding reduction in the cost of grading and bridge work.

During this twelve month period of road building activities there was awarded the 704 miles of pavement contracts at a total cost of \$19,647,990, and in addition grading and bridge contracts which made the total value of contracts let for the year \$23,133,805.

Illustrative of the practical progress which has been made by the Division of Highways during the past year is the fact that its general effort has been to connect up the unfinished gaps in through State routes instead of a patchwork, haphazard system of building here and there. The division has concentrated its efforts on completing the important trans-State highway.

For example, at the commencement of the period covered by the division's report there were numerous gaps in the Federal system. During the year contracts were let covering practically all of these stretches and the entire Federal road system is now complete with the exception of a few short gaps where grade separation or similar projects are pending. On December 31, 1921, however, the entire Federal system was opened to traffic, and by the time this report reaches the public it is

a practical certainty that every single stretch of pavement in that system will have been completed. This system, of course, will be extended as rapidly as possible. Congress during the year appropriated an additional sum of \$75,000,000 to the various states for Federal-aid roads, and Illinois' share in this sum will approximate \$3,250,000.

A summary of the division's work would not be complete without reference to its program for 1922. This calls for more record breaking road building. It contemplates the completion of over 1,000 miles of hard surfaced pavement on the State bond issue system as well as the carrying on of a large volume of heavy grading and bridge work. This program as far as practicable will be confined to continuous trunk lines. But the trunk line program will be supplemented by a program of paving or grade sections on bond issue roads in as many counties of the State, not touched by the trunk lines, as is possible. This program is authorized to the division by the Governor who has pledged "a thousand miles of completed pavement and a dollar's worth of road for every dollar expended in 1922."

DIVISION OF WATERWAYS.

The Division of Waterways, quietly but most effectively has directed its chief energy during the past year to the removal of those almost innumerable obstacles which for years delayed work on the Illinois waterway project. The greatest achievement of the division for the year was the actual commencement of work on this great project which is to connect the Great Lakes with the Gulf. On November 6, 1920, the first earth was turned at Bell's Island, west of Marseilles, for the lock at the end of the auxiliary channel to be constructed there. This project requires the improvement of the DesPlaines and Illinois Rivers between Lockport and Utica, a distance of sixty-five miles. Because these rivers cannot be used for that distance, navigation between Chicago and the Gulf is blocked. Commencement of work at Marseilles on this project insures to the State of Illinois and the entire Middle West the advantages long sought through the medium of a Great Lakes to the Gulf waterway.

Delay in the letting of contracts for the completion of this project was occasioned in 1921 only because of prohibitive costs. Early in the year the Governor was compelled to urge postponement of contract letting because of this fact and in the expectation that prices would become lower and construction costs would be reduced. Time has proven this judgment to be correct, for during the period of this report prices for the principal commodities which would be used in the construction of the waterway have dropped from 17 to 32 per cent.

This development, coupled with the success of the division in ironing out many of the obstacles obstructing this great project, make possible, the division believes, the prosecution of actual construction

work and the completion of the sixty-five mile stretch within the near future. The task is herculean but the division believes that now, after long years of preliminary planning, conditions are such that during the next year the construction work can be pushed and the project finished within a reasonable time. One of the important developments of the year, concerning the waterway, was the decision of the United States Supreme Court in the case of the Economy Light and Power Company, which had purchased a considerable area of land and become riparian owner along the DesPlaines River from Joliet to its mouth. It had planned water power development and started construction of a dam at the mouth of the DesPlaines River. The State Supreme Court rendered an opinion in favor of the company, holding the DesPlaines not a navigable stream. The United States Supreme Court, however, holds the river to be a navigable stream, which gives supervision and control of it to the Chief of Engineers and requires a permit from the Secretary of War before dams or other structures can legally be placed there. Thus no potential value of land because of the opportunity of water power development can be asserted against the State. This development makes the completion of plans for the waterway and construction work a much more simple matter.

In its other activities, concerning which the public knows little, but which are most important, the division has been most active during the year in the prevention of encroachments and unnecessary pollution of streams and has done most effective work.

DIVISION OF PARKS.

The Division of Parks, during the past year, has made rapid progress in placing Illinois in the position where it belongs as one of the leading states in the conservation for the benefit of the people of areas of land which are noted for beauty of scenery or historic interest.

The Illinois plan, which is now being rapidly prosecuted, has as its final object the improvement or reclamation of every important spot in the State that is hallowed by historic memory. Many such places have been taken over by the State and no effort or reasonable expense is being spared to preserve and improve them. The historic spots which are now under the supervision of the Department of Public Works and Buildings are as follows:

Lincoln Monument, Lincoln Homestead, Vandalia Courthouse, Douglas Monument, Fort Massac, Fort Chartres, Old Salem Park, Starved Rock Park, Metamora Courthouse, the site of Fort Creve Coeur, near Peoria, and the site in the city of Dixon on which was located the blockhouse in which Abraham Lincoln was quartered as a soldier during the Black Hawk War.

The purchase is contemplated of other historic and scenic spots, among which are:

White Pine Forest in Ogle County and Cahokia Mounds, a short distance from East St. Louis.

The rapid extension of the State's hard road system is making the State parks more popular year by year, giving opportunity as it does to citizens in every section of the State to visit the different scenes of historic interest. Because of this fact improvement work on the different parks and scenes of historic interest is being pushed by the Division of Parks as rapidly as possible and special arrangements are being made at all points for the convenience of tourists, especially those who make the trip by motor. For example, the motor tourists camp at Starved Rock is declared by interstate tourists to be one of the best equipped and most conveniently arranged in the Middle West.

DIVISION OF ARCHITECTURE AND ENGINEERING.

The Division of Architecture and Engineering reports additions to the State hospitals providing 3,165 new beds and relieving the serious congestion of recent years. These new buildings not only add greatly to the comfort of inmates, but also make possible greater efficiency in their treatment. During the year plans were approved for two buildings, costing approximately \$150,000 each, for the care and treatment of war veterans in the State hospitals. Illinois is the first State to make this provision. The initial group of the State Educational and Research Hospital was completed in Chicago.

Much progress has been made in the standardization of institution buildings. Typical individual buildings have been planned with their internal arrangements adapted to the special requirements of each of the various types of the insane and feeble-minded. Standard details have been adopted, looking toward simplifying maintenance and upkeep. A start also has been made towards standardizing farm buildings.

DIVISION OF PRINTING.

The Division of Printing continued in 1921 its policy of economy and insisted that sound business principles should be recognized by all State governmental departments in their requisitions for printing and supplies. It was compelled, as for several years past, to fight high price scales. Early in the year bids were received for the annual printing contracts and all were rejected, the division maintaining that prices asked by the competitive bidders were not equitable, that cost scales would soon find a lower level and that even if this should not be the case the State would successfully practice economy by buying its printing and supplies in the open market. The judgment of the division proved sound, for during the progress of the year printing and supplies were purchased in the open market at lower figures and when bidders were again asked for figures in the winter contracts were finally let at a saving of approximately \$40,000 to the State.

PURCHASE AND SUPPLIES.

The Division of Purchase and Supplies maintained during 1921 the same record of economic administration as in the years immediately preceding. Sound business judgment coupled with careful investigation of economic and of market conditions saved to the taxpayers of Illinois thousands upon thousands of dollars. This effective business judgment was illustrated by the division in its labors in the handling of requisitions for the Division of Highways and the Adjutant General's Department. This work the division handled in a most satisfactory manner without any increase to its office force. Especially interesting in the report of the division appearing elsewhere in this volume, is its recommendation concerning the manufacture of staples in State institutions. Concerning this discussed subject the report says, "It would seem, based upon the experience of this division during the war and immediately thereafter, particularly, that systematic manufacture of certain items in our State penal institutions would not only relieve the taxpayers but would provide a sure source of supply for other institutions in the State."

DIVISION OF HIGHWAYS.

FRANK T. SHEETS, *Superintendent of Highways.*

CLIFFORD OLDER, *Chief Highway Engineer.*

For convenience and efficiency the work of the Division of Highways is administered through six bureaus: namely, the Bureau of Design; Bureau of Construction; Bureau of Maintenance; Bureau of Tests; Bureau of Machinery, and Bureau of Audits. In order to facilitate the field work, nine geographical districts have been established with a district engineer in charge of each who reports to the various bureau chiefs according to the nature of the work involved.

Following is a summary of the duties of the various bureaus:

Bureau of Designs.—Making reconnaissance surveys prior to the general location of State Bond Issue and Federal-aid roads; making detailed surveys and preparing plans, estimates, proposals, specifications and contract forms for all Federal-aid, State Bond Issue and State-aid road and bridge work; preparing descriptions and plats and superintending the purchase of right-of-way for State Bond Issue, Federal-aid and State-aid roads; preparing plans of county and township bridges and checking all bridge plans submitted for approval according to law; giving consulting service to highway officials on road and bridge work; checking road and bridge proposals, plans, estimates, and contracts submitted for approval according to section 15d of the road law. For convenience, the work of this bureau is subdivided into a road office and bridge office under the supervision of the road engineer and bridge engineer respectively.

Bureau of Construction.—Supervising the construction of roads and bridges built under the supervision of the division and making final inspection when completed; checking and passing upon estimates allowed contractors for work done; supervising the preparation of Federal-aid reimbursements in payment for completed Federal-aid roads; supervising statistics prepared on completed work; supervising the distribution of crushed stone supplied by the two State penitentiaries; directing the supervision of day labor construction.

Bureau of Maintenance.—Inspecting, repairing, and maintaining roads built under the jurisdiction of the division which, when accepted in accordance with the provisions of the law, are taken over by the State for maintenance.

Bureau of Tests.—Testing and approving of materials used in the construction or maintenance of roads and bridges built under the juris-

- diction of the division; testing, upon request of county and township officials, materials used in county or township road and bridge construction.

Bureau of Machinery.—Receiving and placing in storage trucks and other equipment and materials allotted to the State by the Federal Government; arranging for rental of such equipment to contractors on road work, counties, townships, and other municipalities; repairing and distributing of such equipment; and keeping systematic records in connection therewith.

Bureau of Audits.—All of the accounting and clerical work in the division is handled in this bureau under the direction of the chief clerk.

The details of the work of the Division of Highways are shown in the following pages under the headings of the various bureaus of the division. However, there are certain especially interesting phases of the division's activities which should be pointed out.

FEDERAL-AID.

In previous reports, the Federal-aid road system has been described and the fact was stated that the State had received an appropriation of approximately \$12,000,000 from the Federal Government and had met this with an appropriation of approximately \$15,000,000 to be derived from motor license fees.

At the beginning of the period covered by this report, there were a number of gaps in the Federal system for which no contracts had been awarded. During the period of this report, contracts have been let covering practically all of these gaps, and the entire Federal road system has been completed with the exception of a few short spaces where grade separations or similar projects are pending. However, on December 31, 1921, the entire Federal system is opened to traffic and may be traversed throughout its entire length at all seasons of the year. Where pavement has not as yet been completed, suitable temporary cinder or gravel wearing surfaces have been placed.

Recently Congress appropriated a further sum of \$75,000,000 to the various states for Federal-aid road work and Illinois' proportion of this sum will be approximately \$3,250,000. This will insure the continuation of the Federal-aid work in the State.

STATE BOND ISSUE ROADS.

Prior to January 1, 1921, practically no work had been done on the State bond issue system except such preliminary steps as the reconnaissance surveys, the fixing of the general location of respective routes, the making of surveys, and the preparation of plans and estimates. After this date, however, steps were taken to prosecute State bond issue work actively. On February 18, bids were taken for a large mileage of roads on this system. When these bids were analyzed, it was found that the

price for an 18-foot concrete pavement averaged approximately \$39,000 to \$40,000 per mile including a normal amount of grading, culvert, and bridge work. Also bids were received at the same time for considerable heavy grading and bridge work. It was felt that the prices asked for pavement on that date did not reflect the prevalent economic conditions and these bids were rejected and a public statement given out by the Governor and the director of the department that no contracts would be let for an 18-foot Portland cement concrete pavement having a normal amount of grading, culvert, and bridge work where the price exceeded \$30,000 per mile.

This decision resulted in a storm of criticism on the part of certain people who did not understand the conditions of the construction market, and on the part of certain interests who demanded that the road work should proceed regardless of cost. However, this policy was adhered to and in subsequent lettings throughout this year 704 miles of pavement have been awarded well within the figures above stipulated. In fact, the average for all Portland cement concrete pavements 18 feet in width awarded directly by the State since January 1, 1921, has been \$28,553 per mile. A corresponding reduction in the price of grading and bridge work has been effected, and this reduction is shown in detail in the later parts of this report. During the year of 1921 there were awarded 704 miles of pavements at a total cost of \$19,647,990. In addition, grading and bridge contracts were awarded making the total value of contracts let for the year \$23,133,805. On December 31, 1921, there are 542 miles of uncompleted contracts for pavements.

It is not claimed that all roads in the State can be built at the \$30,000 per mile figure. In certain sections, topographic conditions are such that deep cuts and fills must be made and large bridges must be constructed. In such cases this work must be done prior to the laying of the pavement slab in order to avoid danger of damage due to settlement. Such highways, of course, are expensive, but the indisputable fact remains that during the year 1921 pavements having a normal amount of grading and bridge work which previously were costing over \$40,000 per mile have been awarded at a figure under \$30,000 per mile.

An examination of the progress map included with this report will reveal that the mileage under contract constitutes principally a trunk line system of roads extending the scope and usefulness of the Federal-aid road system already completed.

1922 PROGRAM.

The program for the year 1922 contemplates the completion of 1,000 miles of durable hard surfaced pavements on the State bond issue system as well as the carrying on of a large volume of heavy grading and bridge work which must be undertaken in certain sections of the State in advance of the paving operations. In so far as transportation

facilities and material supplies will permit, the paving program will be confined to continuous trunk lines. However, the mileage of such work which can be prosecuted in any year is necessarily limited. Therefore, the trunk line program will be supplemented by a program of paving of grading sections on Bond Issue roads in all the counties of the State not touched by the trunk line program. By so doing, the amount of work which it is possible to complete during the coming year can be greatly increased, and subsequent years will connect any isolated sections which may be thus built.

During the construction season of 1920, 347 miles of pavement were completed, and during the construction season of 1921 the pavement completed amounted to 405 miles. It is readily seen that the contracts now unfinished and carried over into 1922 constitute a paving program much larger than has ever before been undertaken by the division. It is intended to continue the letting of contracts during the spring months so that enough work will be placed under contract to insure the completion of the 1,000 miles of pavement during 1922. In brief, the 1922 program can be summarized by Governor Small's slogan, "A thousand miles of completed pavement, State Bond Issue work prosecuted in every county of the State, and a dollar's worth of roads for every dollar expended."

FINANCES.

Up until October 25, 1921, all road work on the State Bond Issue system has been financed by means of Federal-aid appropriations and automobile license fees. The State bond issue of \$60,000,000 remained untouched until that date. At that time, however, it became apparent that the motor vehicle license fees would be temporarily exhausted and that it would be necessary to market some of the State road bonds. Accordingly, the Governor, the Director of the Department of Public Works and Buildings, and other State officials arranged for the sale of these bonds. Fifty-one auction bids were submitted by 34 different banking and trust companies with the result that these $4\frac{1}{2}$ per cent bonds were sold at 94.02 resulting in an interest rate of $4.82\frac{1}{2}$ per cent.

Some money has already been expended as a result of the sale of these bonds, and additional bonds will have to be sold as the construction work progresses during 1922.

GENERAL ACTIVITIES.

The reader's attention is directed to subsequent parts of this report in which the activities of the division relating to day labor road construction, consulting services to counties and townships, testing and inspection of materials, maintenance costs, and the use and distribution of surplus war equipment and machinery are set forth.

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

LEN SMALL, GOVERNOR
G. R. MILLER, DIRECTOR DON GARRISON, ASSISTANT DIRECTOR
F. T. SHELTS, SUPERINTENDENT OF HIGHWAYS
CLIFFORD OLDER, CHIEF HIGHWAY ENGINEER

MAP SHOWING CONSTRUCTION PROGRESS ON FEDERAL AID AND STATE BOND ISSUE ROADS

<input type="checkbox"/>	NO WORK DONE
<input checked="" type="checkbox"/>	HEAVY GRADING CONTRACTS AWARDED
<input checked="" type="checkbox"/>	HEAVY GRADING COMPLETED
<input checked="" type="checkbox"/>	PAVEMENT CONTRACTS AWARDED
<input checked="" type="checkbox"/>	PAVEMENT COMPLETED
<input checked="" type="checkbox"/>	NARROW PAVEMENT IN PLACE
<input checked="" type="checkbox"/>	NARROW PAVEMENT IN PLACE WITH MACADAM OR GRAVEL SHOULDERS



PREPARED BY
BUREAU OF DESIGN
DEC. 1 1921

[illegible]

JOHN H. ADAMS





INVESTIGATIONAL AND RESEARCH WORK.

The division has been conducting a most extensive and practical series of investigational and research work in highway engineering. The most spectacular portion of this work is the Bates experimental road approximately two miles in length. Sixty-three different sections of pavements were laid on this highway consisting of Portland cement concrete, brick, and asphalt of various thicknesses and combinations. During the year 1922 it is proposed to subject this pavement to a severe service test by means of carefully regulated motor truck traffic. Much valuable information has already been secured from this experiment, and much more valuable information will be secured as the test proceeds. The information gained thus far has led to a change in pavement design which will result in much stronger pavements at reduced costs.

NEW MAINTENANCE LAW.

The Fifty-second General Assembly passed a most progressive piece of highway legislation providing for a system of State highways. This law specifies that the Department of Public Works and Buildings may take over for maintenance the State Bond Issue road system whether completed or not, and, as funds become available, the Department may also take over the State-aid road system of the State as laid out in the several counties. The law further stipulates that until the Department of Public Works and Buildings shall take over the State-aid system of roads, the respective county boards shall be responsible for their maintenance, and provides for the levying of a special tax not exceeding 25 cents on the \$100 equalized assessed valuation to be known as a county highway tax.

This centralization of authority in the maintenance of the main county roads should result in greatly improved road conditions within the near future. At this time, the Department has not assumed the maintenance of the State Bond Issue road system, but in all probability plans will be worked out for undertaking this during 1922.

BUREAU OF DESIGN.

During the past fiscal year the work of the Bureau of Design has made another large increase in volume. The number of miles and the estimated cost of the road work for which plans have been prepared under the direction of the Road Office has approximately doubled. A large mileage of State Bond Issue contracts was awarded and plans are practically finished now and awaiting an early letting for a large additional mileage. A large number of heavy grading contracts have also been awarded. It is necessary to permit the heavier fills to settle at least a year before placing the pavement and consequently such work is let well in advance of the paving contracts. Bridge work is constantly

on the increase not only in regard to the number of plans turned out for the work done directly by the State, but also in the number of plans checked for the counties on 15d and township work. The reduction of prices during the past year has been a great stimulus for bringing about this increased amount of work done by the counties. During the past year practically all remaining contracts have been awarded to use up the State-aid appropriation made in 1917 and for which work was held up due to war conditions. One of the largest activities of this bureau is the purchasing of right of way. This work is constantly on the increase because of the larger program of work outlined for the coming year. All right of way for State Bond Issue roads is paid for by the local people, but this bureau prepares the detailed options, descriptions, plats, and dedication forms for all such right of way required. During the past year application was made to the Illinois Commerce Commission for the separation of a number of grade crossings. This is a rapidly growing feature of the work of this bureau.

LOCATION OF ROADS, SURVEYS, AND PLANS.

Before the location of the State Bond Issue or Federal-aid roads is decided, a reconnaissance survey is made by a party of competent engineers. All possible routes are investigated, and a report is made showing the comparisons of the various routes with respect to mileage to travel, mileage to build, cost, number of sharp turns, number and character of grade crossings, maximum percentage of grade and population served. With this information available, a public hearing is held at which the local interests are invited to advance their preferences. Upon the basis of the information derived from the engineering reports and the public hearing, the final location is decided. Approximately 60 per cent of the State Bond Issue roads have been located to date. Surveys and plans have been completed for more than 2,000 miles of road.

CHANGES IN ROAD DESIGN.

Engineering investigations conducted in conjunction with the Bates Experimental Road are beginning to show results. During the past year a complete change was made in the design of the concrete pavement. By adding a small amount of reinforcing steel near each edge of the pavement and placing a concealed joint along the center of the pavement slab, and tying the two slabs together with reinforcing steel, it has been possible to reduce the thickness of the pavement to seven inches and still leave a stronger pavement than the original eight-inch thickness used the year before. This also resulted in a saving of cost. Results obtained to date from experiments on the Bates Experimental Road have proved the adequacy of the new design. An 18 foot pavement is now considered the minimum double-traffic road for the State Bond Issue system, and 20 feet is preferred near the larger centers of population. The shoulder

to shoulder width of all roads in the system has been established at 30 feet, and all small culverts and bridges will have a roadway equal to the shoulder to shoulder width of the road. For economic reasons the larger bridge structures have a 20 foot roadway. Rapid strides have been made during the past year in regard to quality of highway alignment. Right-angled turns are eliminated wherever possible and where it is necessary to make such turns a minimum radius of 500 feet is used. All curves which have a radius of less than 6,000 feet are super-elevated or banked so as to enable automobiles to travel at a conservative uniform speed without danger of skidding or over-turning.

BRIDGE DESIGN.

More attention is being given the aesthetic features of bridge design. During the past year an open concrete rail design was employed which gives variety to the appearance of concrete bridges. A number of new standards were added during the past year and an increasing number of larger structures were designed to meet special conditions.

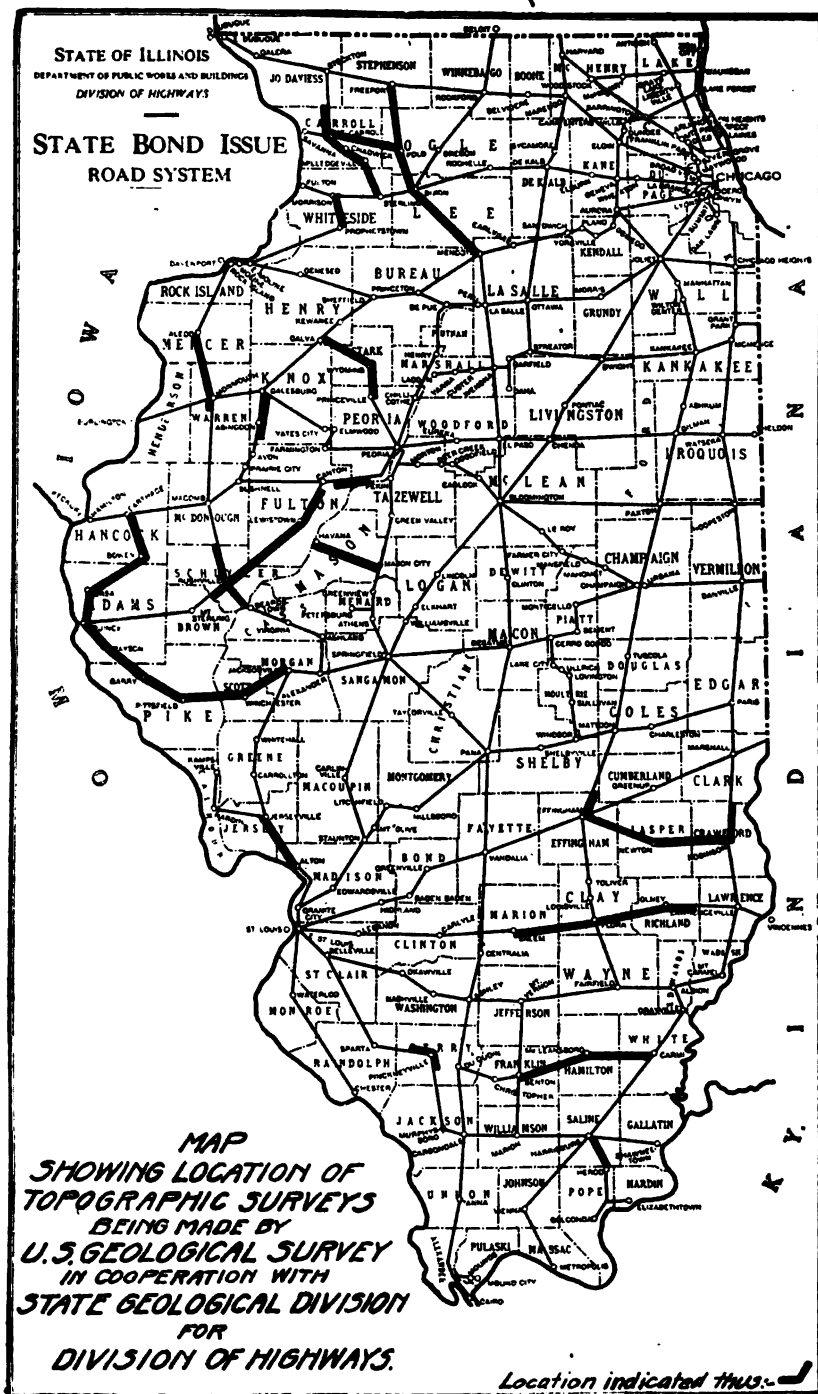
TOPOGRAPHIC WORK.

Topographic work in the State of Illinois, which is being carried on by the United States Geological Survey and the State Geological Survey, has been planned so as to be of the greatest assistance to the highway program. The Division of Highways furnished the State Geological Survey Division with maps showing the location of the routes where the most difficult location problems would be encountered, and topographic surveys are now being made for strips three to five miles in width along these routes. The topographers forward their field maps to the Division of Highways as soon as they are completed, and these maps are used in connection with the location of the Bond Issue routes. The State is thus saved expensive topographic surveys and at the same time the Geological Survey Division is able to carry on its own work to advantage.

TABLE 1—FEDERAL AID ROAD WORK.

PAVEMENT.

Contracts awarded.	Miles.	Contract cost.	Cement.	Total cost.
Prior to June 30, 1920.....	589.58	\$15,459,511 99	\$4,071,623 79	\$19,531,135 78
June 30, 1920 to January 1, 1921.....	3.00	86,063 85	21,445 12	107,508 97
January 1, 1921 to January 1, 1922.....	30.77	663,927 20	201,715 37	865,642 57
Totals.....	623.35	\$16,209,503 04	\$4,294,784 28	\$20,504,287 32



DIVISION OF HIGHWAYS.

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TABLE 1—FEDERAL-AID ROAD WORK—Concluded.

GRADING AND BRIDGES.				
Contracts awarded.	Miles.	Contract cost.	Cement.	Total cost.
Prior to June 30, 1920.....	40.22	\$ 727,776 92	\$23,744 38	\$ 751,521 30
June 30, 1920 to January 1, 1921.....	134.86	2,052,111 45	34,087 14	2,086,198 59
January 1, 1921 to January 1, 1922.....	0.30	7,782 25	508 86	8,291 11
Totals.....	175.38	\$2,787,670 62	\$58,340 38	\$2,846,011 00

SEPARATE BRIDGES.				
Contracts awarded.	Number of bridges.	Contract cost.	Cement.	Total cost.
Prior to June 30, 1920.....	9	\$ 197,231 42	\$14,105 92	\$ 211,337 34
June 30, 1920 to January 1, 1921.....	81	1,278,975 64	62,649 73	1,341,625 37
January 1, 1921 to January 1, 1922.....	None			
Totals.....	90	\$1,476,207 06	\$76,755 65	\$1,552,962 71
Total cost of all Federal-aid road work awarded to date.....		\$20,473,380 72	\$4,429,880 31	\$24,903,261 03

TABLE II—STATE BOND ISSUE—WORK AWARDED JANUARY 1, 1921, TO JANUARY 1, 1922.

PAVEMENT.	
Miles awarded	607.33
Contract cost	\$13,181,052.52
Cement	4,173,093.19
Total cost	\$17,354,145.71

HEAVY GRADING.	
Miles awarded	270.50
Contract cost	\$1,730,930.42
Cement	65,099.46
Total cost	1,796,029.83

SEPARATE BRIDGES.	
Number of bridges.....	144
Contract cost	\$1,369,052.02
Cement	122,146.20
Total cost	1,491,198.22

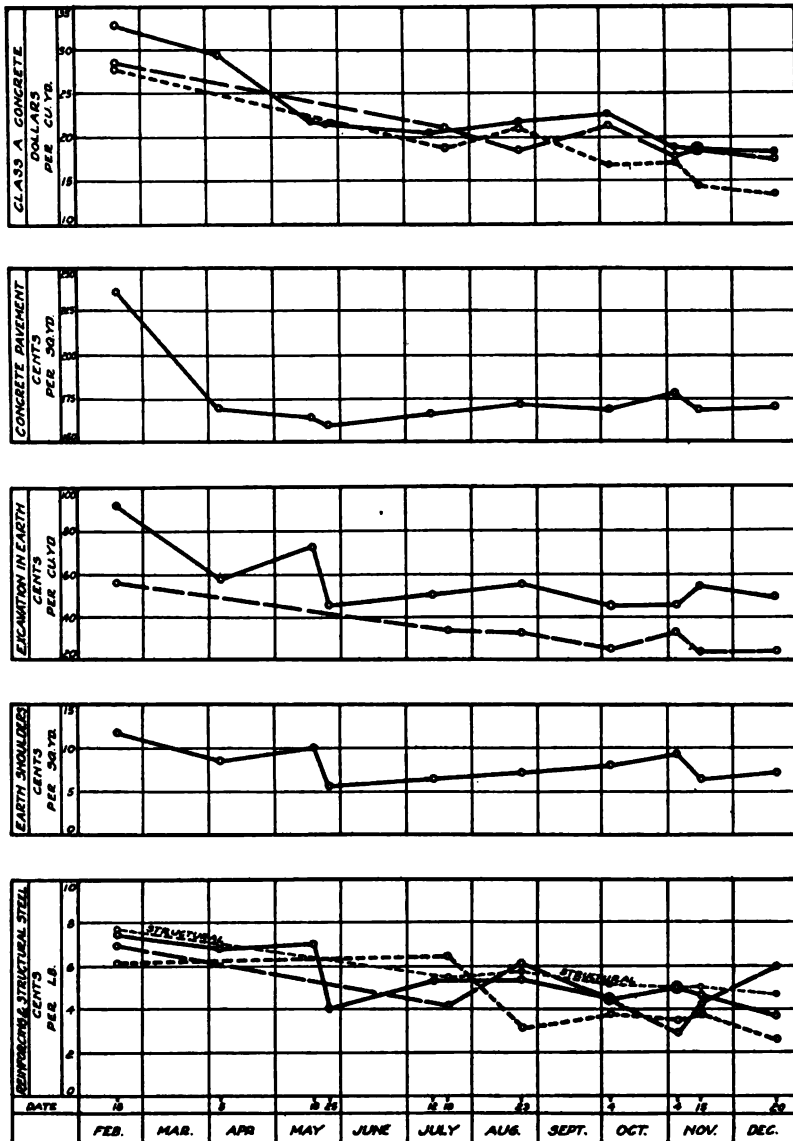
Total all State Bond Issue work awarded to date.....	\$20,641,373.81
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NOTE:—No work paid directly out of the \$60,000,000 Bond Issue, awarded prior to January 1, 1921.

TABLE III—WORK AWARDED JANUARY 1, 1921 TO JANUARY 1, 1922.

PAVEMENT.						
Class.	Miles carried over from 1920.	Miles awarded 1921.	Total.	Miles completed 1921.	Miles uncompleted Jan. 1, 1922.	Total cost of pavement awarded during 1921, including cement.
Federal-aid.....	160.20	30.78	190.98	188.63	2.33	\$ 865,642 57
State Bond Issue.....		607.33	607.33	95.87	511.46	17,354,145 71
State aid.....	10.51	5.09	15.60	13.13	2.47	115,679 45
County aid.....	68.40	61.14	129.54	104.10	25.44	1,312,523 18
Totals.....	239.11	704.32	943.43	401.73	541.70	\$19,647,990 91

GRAPHS SHOWING UNIT PRICE RANGE
ON PRINCIPAL ITEMS
IN HIGHWAY CONSTRUCTION DURING 1921



PAVEMENT CONTRACTS ——— HEAVY GRADING CONTRACTS ——— SEPARATE BRIDGE CONTRACTS ———

Note:— Unit Prices for February 19²¹ are based on low bids. Unit Prices for all other months are based on awarded costs. Weighted averages are used for all items.

DIVISION OF HIGHWAYS.

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HEAVY GRADING, (including small drainage structures).

Class.	Awarded during 1921.		Total cost of work awarded during 1921, including cement.
	Miles.	Cu. yds. of excavation.	
Federal-aid.....	.30	6,205	\$ 8,291 11
State Bond Issue.....	270.50	3,773,739	1,796,029 88
State aid.....	2.22	12,167	11,447 49
County 15d.....	17.57	87,115	100,154 52
Totals.....	290.59	3,879,226	\$1,915,923 00

SEPARATE BRIDGES (includes both concrete and steel).

Class.	Awarded during 1921.			Total cost of work awarded during 1921, including cement.
	Number of sections.	Number of bridges.	Cu. yds. of concrete.	
Federal-aid.....				
State Bond Issue.....	76	144	39,527	\$1,491,198 22
State aid.....	6	19	976	21,280 39
County 15d.....	2	2	1,332	57,412 82
Totals.....	84	165	41,835	\$1,569,891 43

Total cost of paving awarded directly by State during 1921	\$18,335,467.73	
Total cost of paving awarded by counties under Sec. 15d during 1921.....	1,312,523.18	
Total cost		\$19,647,990.91
Total cost of heavy grading awarded directly by State during 1921.....	\$1,815,768.48	
Total cost of heavy grading awarded by counties under Sec. 15d during 1921.....	100,154.52	
Total		1,915,923.00
Total cost of separate bridges awarded directly by State during 1921.....	\$1,512,478.61	
Total cost of separate bridges awarded by counties under Sec. 15d during 1921.....	57,412.82	
Total		1,569,891.43
Grand total of work awarded in 1921.....		\$23,133,805.34

SERVICES RENDERED RELATING TO BRIDGES.

The principal activities of the bridge office are as follows:

Preparation of plans, specifications and estimates for all State bridge work.

Preparation of plans, specifications and estimates for County and Township bridge work, when requested to do so by the County Superintendents of Highways.

Checking and approval of plans for highway bridges prepared by County Superintendents of Highways, or other engineers.

Investigation and analysis of existing highway bridges to determine strength and advisability of making repairs.

Checking and approval of detailed shop drawings for steel bridges.

Shop inspection of structural steel for bridges, to correct errors in fabrication.

Preliminary surveys and investigation of sites for new bridges.

Furnishing advice and assistance to County Superintendents of Highways and other highway authorities on all matters dealing with highway bridge work.

Preparation and distribution of General Specifications for Bridge Work, which under the Road and Bridge Law must govern the design and construction of all bridges and culverts upon the public highways of the State.

The amount of work handled since the Highway Department was created is summarized briefly in the following table:

SUMMARY OF BRIDGE WORK TO DECEMBER 31, 1921.

Year.	Plans and Specifications Prepared.	Estimated Cost.	Contracts let on State Plans	Contract Price.	Foreign plans Approved.
1906.....	15		11	\$ 37,035 00	Plans prepared
1907.....	113		48	41,519 00	by county
1908.....	149		64	165,674 00	Sup't. of
1909.....	122		92	133,285 00	Highways
1910.....	203		141	148,432 00	and others
1911.....	241		127	238,903 00	outside of
1912.....	214		150	212,694 00	Division of
1913.....	238	\$ 342,052 00	139	200,834 00	Highways. 5
1914.....	269	470,363 00	109	184,792 00	269
1915.....	707	984,420 00	565	841,509 00	230
1916.....	735	1,169,743 00	439	566,657 00	653
1917.....	480	812,614 00	502	582,993 00	503
1918.....	206	499,702 00	169	277,130 00	443
1919.....	231	761,458 68	202	514,897 00	725
1920.....	443	2,841,896 22	301	2,208,494 84	261
1921.....	375	2,098,986 49	339	1,928,631 44	362
Total.....	4,741	\$9,981,235 39	3,398	\$7,983,480 28	3,451

The above table does not include bridges and culverts built in connection with State-aid, Federal-aid and State Bond Issue road work, as such structures are included in the reports on road construction. Since January 1, 1921, plans have been prepared for 4,570 bridges and culverts, to be constructed in connection with State road contracts, estimated cost \$2,153,562.64. Adding this to the distinctive bridge work given in the table, the output of the Bureau of Design, since January 1, 1921, has been 4,945 plans for bridges and culverts, estimated to cost \$4,252,549.13. The average cost of preparing these plans and specifications has been 1.66 per cent of the estimated cost of the work.



Sheridan Bridge over Fox River near Sheridan in LaSalle County. Reinforced concrete arches, four spans at 55 feet each. Completed 1920. Contract price, \$23,450.



Springfield-Peoria Road at Sangamon River north of Springfield, showing 18-foot concrete pavement and reinforced concrete overflow bridge consisting of three spans at 40 feet each.



Station 1334+45, Section L, Effingham County. Over Little Wabash River west of Effingham. One steel span at 100 feet; two concrete spans at 50 feet each. Completed 1920. Contract price \$25,000.



Engels Bridge over Kankakee River at Wilmington. Picture taken during construction. Completed 1921. Reinforced concrete open spandrel arches. Seven spans at 68 feet each. Contract price \$82,987.

The following tables indicate approximately the relation between State and County bridge work, as determined by the preparation of plans by the Bureau of Design and the awarding of contracts. These tables do not give the exact proportion, as a number of County Superintendents of Highways prepare their own plans and submit to the department for approval.

FROM JULY 1, 1920 TO DECEMBER 31, 1920.

Classification.	Plans Prepared.		Contracts Awarded.		
	Number	Estimated Cost.	Number.	Estimated Cost.	Contract Price.
County bridges.....	193	\$ 518,394 00	145	\$ 277,567 64	\$ 287,836 63
State bridges.....	67	1,105,704 51	87	1,182,432 72	1,300,258 36
In State road contracts.....	471	420,264 90	(With pavement)		
Total.....	731	\$2,044,363 41	232	\$1,460,000 36	\$1,648,086 99

FROM JANUARY 1, 1921 TO DECEMBER 31, 1921.

Classification.	Plans Prepared.		Contracts Awarded.		
	Number	Estimated Cost.	Number.	Estimated Cost.	Contract Price.
County bridges.....	278	\$ 923,407 00	169	\$ 453,546 00	\$ 361,556 52
State bridges.....	97	1,175,579 49	370	1,757,761 13	1,567,074 92
In state road contracts.....	4,570	2,153,562 64	(With pavement)		
Totals.....	4,945	\$4,252,549 13	339	\$2,211,307 13	\$1,928,631 44

Other work performed during the year 1921:					
Plans checked and approved for County Superintendents of Highways.....	362				
Existing bridges analyzed for strength.....	10				
Shop drawings for steel bridges checked.....	35				
Shop inspection of steel bridges.....	36				

COMPARATIVE COST OF BRIDGES BUILT WITH TOWNSHIP AND COUNTY FUNDS.

The accompanying curve shows the relative unit cost per cubic yard of concrete for reinforced concrete slab and through girder bridges for a period from 1907 to 1921. The average unit cost was obtained by dividing the actual contract price by the total yardage in the structures considered. The curve shows a range of cost for slab bridges from a low point of \$12.05 per cubic yard in 1915 to a high point of \$30.90 per cubic yard in 1920. The unit cost of through girder bridges runs slightly higher than that of slab bridges, due to the fact that more steel per cubic yard is required, and more expense is involved in building forms and placing concrete.

STANDARD BRIDGE PLANS.

Since the conditions at a large number of sites for small highway bridges are substantially the same, the Bureau of Design has prepared

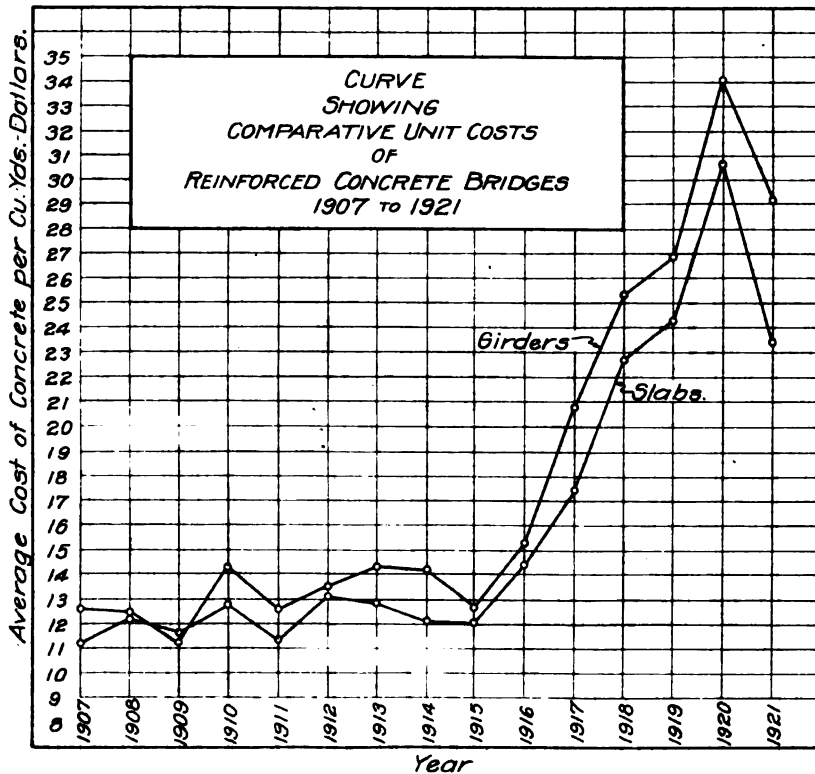


Station 782+00, Section Q, Grundy County. Pony truss with monolithic concrete floor and pavement. Span 80 feet, roadway 20 feet. Built 1920. Contract price \$10,000.

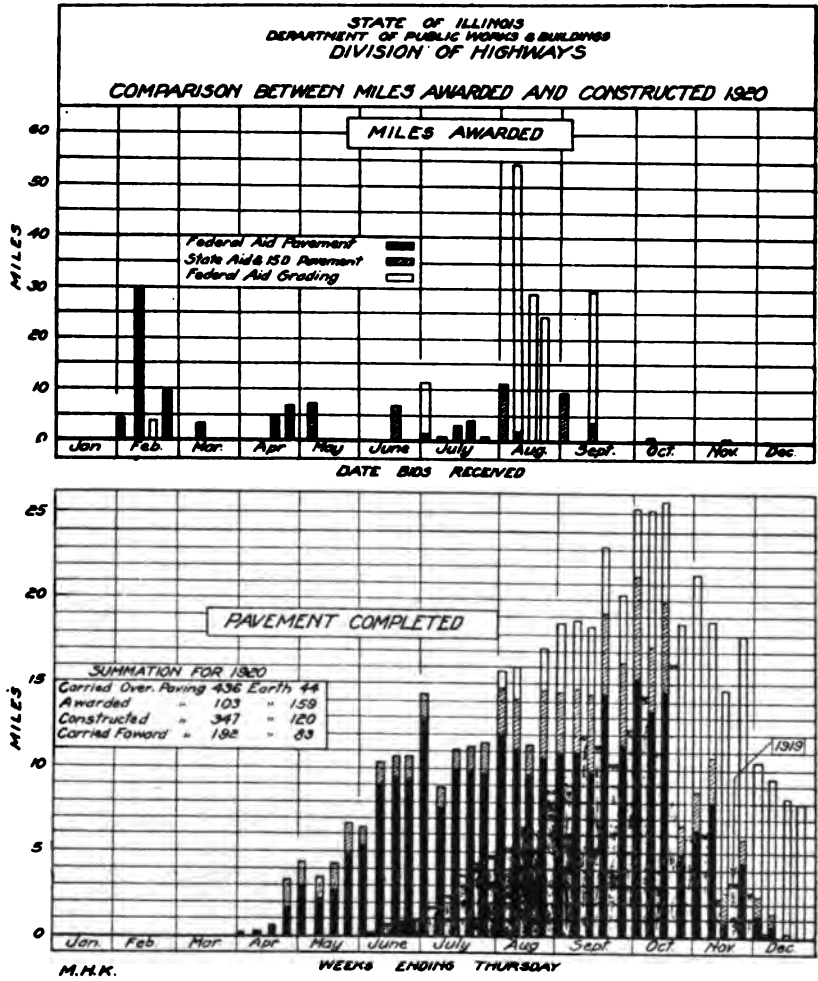


Spring Creek Bridge on Beardstown Road near Springfield. Reinforced concrete through girder design, two spans at 50 feet each. Completed 1921. Contract price \$17,082.14.

standard plans which may be used where the conditions at the site will permit. These plans are made on sheets measuring 21x27 inches between margin lines, and from the tracings, zinc etchings are prepared having a scale exactly one-half that of the original drawings. This reduction in size of plan results in a material saving in blue print paper, and the fact that the same plan may be used at several bridge sites, results in a saving of time in office work.



These standards are revised from time to time as required to bring them up to date. At the present time the department is redesigning an entire new set of standard plans. These plans will include designs for structural steel bridges, reinforced concrete slab and through girder bridges and box culverts. The structural steel bridges are designed for a range in span from 50 feet to 200 feet, and for roadways of 16, 18 and 20 feet in width; the reinforced concrete through girder bridges are designed for a range in span from 30 to 60 feet, and for roadways of 16, 18 and 20 feet in width; the reinforced concrete slab bridges are designed for a range in span from 10 feet to 30 feet, and for roadways of 16 to 30 feet in width; the box culverts are designed for a range in



span from two feet to 12 feet, and roadways from 16 feet to the maximum width necessary.

BUREAU OF CONSTRUCTION.

The duties of the Bureau of Construction are:

To supervise the construction of all State road and bridge work, including all work done by the counties under section 15d of the Road and Bridge Law. The bureau also supervises all day labor construction and the distribution of all crushed stone from the two penitentiaries.

Construction from July 1, 1920, to January 1, 1921, was seriously handicapped on account of unsettled conditions. Material and equipment prices were very high and railroad transportation very irregular. Labor prices were high and most of the labor very inefficient. The 1920 construction program was, therefore, very much retarded.

Construction during 1921 opened in the early spring months with very unsettled conditions. However, by the first of May conditions became settled; there was a surplus of labor and it was very efficient. This materially reduced the material and equipment prices and improved railroad transportation conditions. The entire year was, therefore, considered ideal for construction work; in fact, most all prices on material and labor had returned to the pre-war basis.

During 1921 two large day labor construction units were organized, chiefly to ascertain construction costs and to utilize some of the surplus war equipment allotted to Illinois. The day labor work proved very satisfactory and additional units will be organized for next year's work.

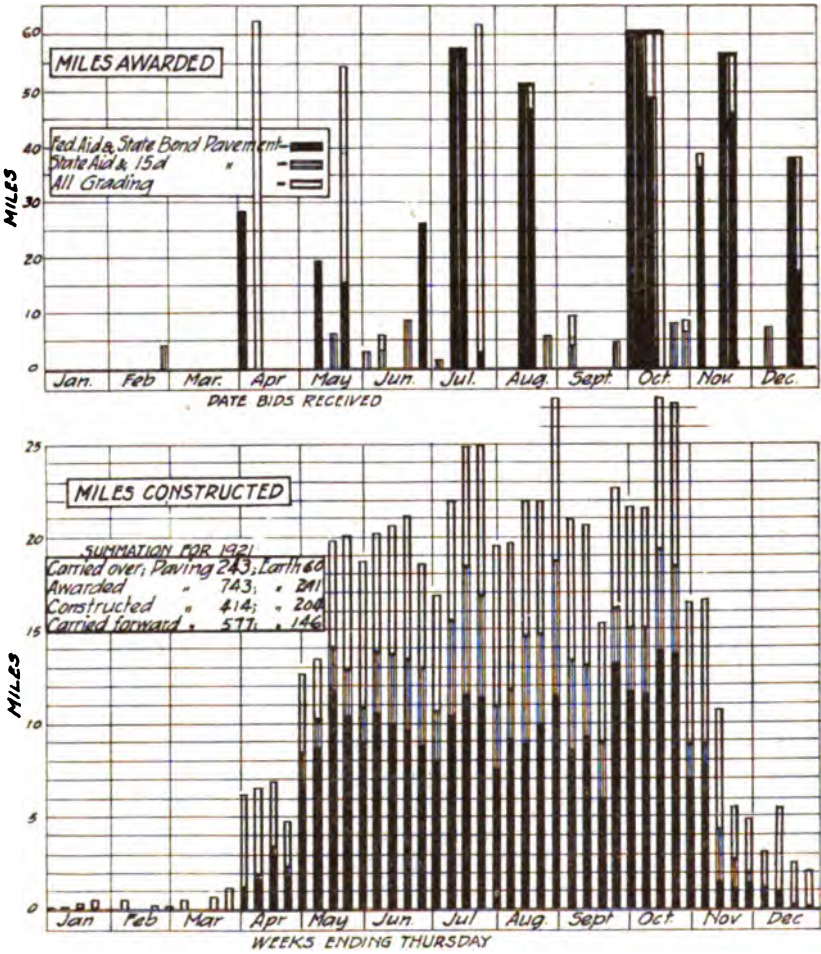
During 1921 there were employed by all contractors doing road, bridge and grading work approximately 7,500 men and 1,500 teams. This does not take into account the labor employed in the preparation of material, equipment, etc., that is used on road work.

On account of the shortage of cement and railroad transportation equipment during the year 1920 and the early part of 1921, the State considered it advisable to store a large amount of cement to prevent delays. The State purchases all cement for contractors and is, therefore, responsible for delays on account of non-delivery. It therefore stood a large percentage of the cost of the storage of the cement. During 1919, 1920 and 1921 there were stored 289,824 barrels at a cost of \$58,228.75, or 20 cents per barrel. During 1921 practically no cement was stored as it was possible to get cement on the work with practically no delay.

During 1921 there was a very noticeable increase in the efficiency of all paving contractors. There were fewer paving mixers working during 1921, but a considerable increase in output was obtained. The following information is given to show some of the records made by paving contractors during 1921:

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

COMPARISON BETWEEN MILES AWARDED AND MILES CONSTRUCTED 1921



DAY RECORD.

W. F. Smith & Co., on June 16 laid 1,434 feet, 2,549.3 square yards. Single shift.
 Jansen & Schaefer, on Aug. 24 laid 1,347 feet, 2,505.8 square yards. Double shift.
 Fred C. Nelson, on Sept. 24 laid 1,305 feet, 2,610.0 square yards. Double shift.

WEEK RECORD.

Fred C. Nelson, Sept. 23 to 29, laid 4,878 feet, 9,756 square yards. Double shift.
 Jansen & Schaefer, Aug. 18 to 25 laid 5,780 feet, 10,275 square yards. Double shift.
 The best week's record for all contractors in the State was for the week ending October 20, when 19.35 miles were completed.

SEASON'S RECORD.

	Pavement laid in ft.	Mixer days.	Output.
R. F. Conway Co.	147,135	234	404
James O. Heyworth	88,185	187	471
Jansen & Schaefer	77,794	131	593*
Fred C. Nelson	23,577	39	604*
Alan J. Parrish	73,890	130	568
Powers & Thompson	71,673	157	456

* Mixer was worked on double shift part of the time.

CONSTRUCTION METHODS AND WORK DONE.

Methods and items of work.	July to Dec. 1920.	Jan. to Dec. 1921.
PAVING.		
Number of paving contractors	90	111
Number of paving mixers operated	126	102
Mixers operated by—		
The use of industrial hauling equipment	27	20
The use of trucks delivering batches from a central proportioning plant to the paver	23	34
The use of central mixing plants hauling the mixed concrete in trucks	10	12
The use of trucks or industrial equipment hauling material from large stor- age piles	9	8
Material stored on subgrade	57	28
BRIDGES.		
Number of bridge contractors	35	54
Number of bridges completed	14	55
GRADING.		
Cubic yards earth moved	745,830	3,350,000
Total number of independent paving, bridge and grading contracts	273	492



Showing grade separation on Federal-aid road north of Chillicothe before paving.



Showing grade separation under the Santa Fe Railroad north of Chillicothe after paving.

BUREAU OF TESTS.

Active growth during the past 18 months has been noted in all branches of work conducted under the charge of the Bureau of Tests. Methods of inspecting materials have progressed to such an extent that it was possible during the past year to inspect over a million cubic yards of concrete aggregates, approximately a million and a quarter barrels of cement and over five million pounds of reinforcing steel to the satisfaction of all concerned. Investigational work which was begun on a moderate scale early in 1921 has now become one of the most important branches of work carried on by this bureau, and has helped place the laboratory in the leading ranks of highway laboratories in the United States.

From July 1, 1920, to January 1, 1921, inspection of cement and concrete aggregates was made at 9 cement mills and 67 aggregate plants. In all cases the materials were inspected before shipment was made, which insured no rejections at the construction site. The placing of inspectors at aggregate plants was begun in the early part of 1920 and proved exceedingly satisfactory during that year.

The branch laboratories established at the different cement mills were under the supervision of Junior Testing Engineers, who carried out 24-hour tests before accepting or rejecting the product. Final tests were made at the main laboratory on all material shipped. During the period noted above about 874,970 barrels of cement were tested at a cost of 1.84 cents per barrel.

Thirty inspectors were maintained at the different aggregate producing plants, and from July 1, 1920, to January 1, 1921, inspected approximately 400,000 cubic yards of material, performing tests for sieve analysis for gradation, clay content, and soft material content. This inspection was maintained at a cost of 5.6 cents per cubic yard.

An estimate on the cost of inspecting the material used in concrete pavements showed that the inspection cost in 1920 was 0.7 per cent of the construction cost.

Besides the plant inspection of cement and aggregates, the bureau maintained inspection at several paving brick plants and creosoting works. A field laboratory in charge of a chemist was also maintained at Deerfield, Illinois, for the purpose of making an analysis and inspection of asphalt and other materials used in the construction of approximately eight miles of asphaltic concrete on the Chicago-Milwaukee Highway.

The main laboratory was called upon to test practically every type of material used in highway and bridge construction work. Tests were made on paving brick, gravel, rock, cement, road oils, tars, paints, asphalts and numerous other materials. In connection with the Bates experimental road, the laboratory made extensive surveys of the materials used, preparing specimens for test at the time of construction and also



Showing gutter sections through deep cuts. The curbs prevent wash and make road safer for traffic.



Completed pavement on Dixie Highway showing easy curves.

for future tests. Tests were also made on samples submitted by the State Geological Survey.

In 1921 inspection of materials was made in a similar manner as in the preceding year, although on a much larger scale. The materials from a greater number of plants were taken care of, and the number of inspectors placed at production plants was increased considerably. In the preceding year one inspector was called upon to inspect the material from five or six plants. Though this method had proven satisfactory, it was thought that every chance of error could be eliminated if the range of activities of the inspectors was lessened. For this reason and also because greater amounts of materials were offered for inspection, inspectors were stationed at almost every plant furnishing materials for Illinois highways. Some inspectors handled the material from several plants, but this was the case only when the plants were situated near each other. District Testing Engineers who were placed over a certain number of plants, were held responsible for the work of the inspectors in their respective districts, and settled small troubles in quick time thus promoting a better feeling with the materials producers.

During the past year over 1,275,000 barrels of cement were tested by this department for use in construction of Illinois pavements and bridges. This amount includes the 139,000 barrels of winter stored cement which was tested in the main laboratory. Partial tests were made on 309,232 barrels of cement from Illinois mills for the Iowa State Highway Commission, the cost of the inspection being borne by the Iowa Highway Department. The inspection of cement for the Illinois Division of Waterways was also undertaken this year by the Bureau of Tests, and amounted to 6,835 barrels.

Estimates of the cost of inspection of cement during the past year show a reduction in cost over the preceding year. Figures indicate that during the past year the cost of inspecting cement was 1.68 cents per barrel, whereas in 1920 the cost was 1.84 cents per barrel.

Aggregate materials from 82 plants received at various times during the year were inspected by a force of 45 inspectors. Over 1,010,000 cubic yards of concrete aggregates were taken care of by these inspectors at an average cost of 6.6 cents per cubic yard.

Plant inspection of cement and concrete aggregate proved so successful that the same method of inspection for steel was adopted in the spring of 1921. Over five million pounds of reinforcing steel were inspected during the year, more than four-fifths of this amount being inspected at the steel mills.

Figures compiled for the year 1921 show that the cost of inspection of concrete materials amounts to .83 per cent of the construction cost, considering the cost of constructing a mile of concrete pavement as \$28,000. Though the percentage has advanced .13 per cent over that



Showing method of building and curing concrete pavement on Lincoln Highway.



Showing finished pavement on Lincoln Highway.

of 1920, the advancement is due more to the drop in construction costs than to the increased cost of inspection.

Due to the efficient field inspection in 1921, the main laboratory was not called upon to do as much testing of sand, gravel and stone as in preceding years. However, check tests on cement; quality tests on materials from all plants producing aggregates for use on Illinois highways; and the hundreds of samples of oils, paints, asphalts, tars and other such materials did not permit a change in the laboratory force. Over a thousand samples of road oils were tested during the year, the Bureau of Tests cooperating in every respect with the counties and townships in their efforts to get the best of oils for their roads.

Investigational work began on a large scale in 1921, and the results of many of the experiments will probably have a bearing on the specifications dealing with future highway construction in this State. An idea of the investigations which were carried out during the past year is given by the following list of experiments:

1. Fatigue of concrete.
2. Curing of concrete.
3. Setting of concrete under low temperatures.
4. Curing of concrete under low temperatures.
5. Prevention of bond on rods in concrete.
6. Investigation of Earthcrete.
7. Investigation of Hard-N-Tyte.
8. Investigation of Super Cement.
9. Investigation of cement failing to pass specifications.
10. Investigation of Novaculite as concrete aggregate.
11. Comparison of slotted and plain cylinders in abrasion tests of stone.

Investigational work was also conducted by the laboratory on the Bates Experimental Road. These experiments dealt with the action of pavements and subgrades under varying temperatures and loads. It is impossible to go into detail in this report regarding the work on the Bates Road, but the following list of experiments may give an inkling of the importance of this phase of investigational work:

1. Effect of repeated loads on different types of pavements.
2. Effect of repeated loads on concrete and concrete base pavements with subgrade excavated.
3. Measurement of distribution of loads on pavements.
4. Effect of temperature on different types of pavements.
5. Measurement of cracks in concrete pavements.
6. Measurement of conductivity of heat in concrete.
7. Measurement of rate at which frost penetrates through subgrade towards center of pavement.
8. Measurement of bearing power of soil under various loading.
9. Determination of moisture content of soil.
10. Effect of tile drainage.
11. Effect of freezing and thawing of soil.
12. Investigation of movement of pavement in relation to subgrade.
13. Investigation of movement of subgrade in relation to pavement.
14. Effect of winter curing on concrete.

With the huge construction program as outlined for 1922, the inspection work of the Bureau of Tests will be greatly increased. Approximate estimates on the amount of material which must be inspected



Condition of Lincoln Highway before paving.



Condition of Lincoln Highway after paving.

produces the astounding figure of 3,000,000 cubic yards of aggregates. The bureau will also be called upon to inspect the materials used in maintenance work as well as the material which will go into the construction of the Illinois waterway.

Besides the inspection work to be done in 1922, the Bureau of Tests is arranging a large investigational program. One of the most important of experiments which will be conducted is the one pertaining to gradation of materials. This investigation is to be made in an effort to arrive at a suitable concrete with the use of smaller aggregate. The result of this experiment may mean that double the amount of aggregates now permissible by present specifications can be used in future construction.

BUREAU OF MAINTENANCE.

The law provides that all hard-surfaced roads built under the State-aid, Federal-aid and Bond Issue laws shall be maintained by the Division of Highways. It also provides that the county shall pay one-half of the maintenance cost on such types as asphaltic concrete on macadam base, bituminous macadam, water bound macadam and gravel, and that the county shall bear the entire expense and have maintenance supervision over earth and oiled earth roads built by State-aid.

The maintenance of all State highways, for which the State is responsible, is now carried on by means of the patrol system, supplemented by a few outfits working under the gang system. This work is divided into sixty patrols with an average of about twenty miles to the patrol. The patrolman is furnished with a truck and other necessary equipment and is responsible for the condition of his patrol to which he is required to give his entire time.

The following tables show the maintenance cost for accepted mileage based on an 18-foot width of pavement:

JUNE 30, 1920, TO DECEMBER 31, 1920.

Type.	*Miles.	**Cost per mile based on an 18 ft. pavement.	Average cost per sq. yd.
Brick.....	100.10	\$ 309 55	.20932
Concrete.....	734.80	277 61	.02628
Bituminous macadam.....	25.19	193 26	.01830
Water bound macadam.....	28.91	1,682 49	.15932
Gravel.....	47.70	480 27	.04547
Earth and oiled earth.....	566.99	44 87	.00425



Dwight day labor job where war equipment was used in building $7\frac{1}{4}$ miles of 18-foot concrete pavement.



Frankfort day labor job where war equipment was used in building $6\frac{1}{4}$ miles of 18-foot concrete pavement.

JANUARY 1, 1921, TO JUNE 30, 1921.

Type.	*Miles.	**Cost per mile based on an 18 ft. pavement.	Average cost per sq. yd.
Brick.....	152.24	\$136 54	.01293
Concrete.....	1,061.49	52 80	.00600
Bituminous macadam.....	24.92	19 22	.00182
Water bound macadam.....	27.22	15 84	.00150
Gravel.....	47.87	21 23	.00201
Oiled earth.....	120.78	29 36	.00278
Earth.....	418.49	96 52	.00914

NOTE.—The above figures include the cutting of weeds and vegetation, cleaning of ditches and drains and maintenance of pavement.

Depreciation charges on equipment are not included for the period of January 1 to June 30, 1921.

* It should be understood that the schedule of mileage given in this table is the total mileage of roads of the different types maintained during the fiscal year regardless of widths.

** The schedule showing cost per mile shows the actual cost per mile of an 18-foot road having the same surface area as exists in the total miles of pavement of each type.

BUREAU OF MACHINERY.

The Bureau of Machinery was organized in July, 1919, for the purpose of receiving and taking care of the surplus war materials received from the government. The organization of nine employes has been increased as the scope of work became greater. At the present time forty employes are required to do the work for this bureau. The mechanical repairs on equipment located in and adjacent to this city are made in a garage which is a part of this organization noted above. The storage of repaired cars, trucks and surplus materials received from the government is carried on as a part of this organization; and the storage buildings are located at the State Fair Grounds, Springfield.

The supplies received from the United States Government are being used for road building and improvement of the highways. Some of the more important items received and being used are:

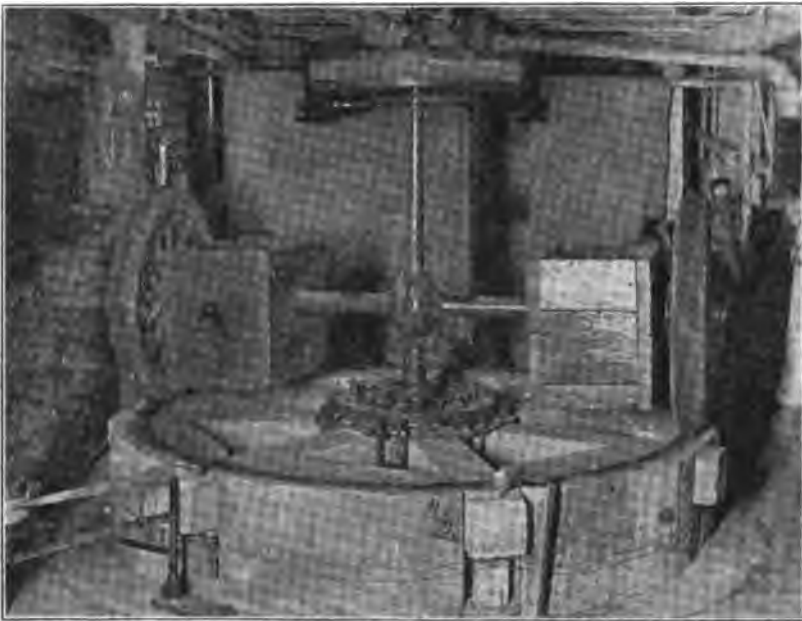
Asphalt plant.	Locomotives (24 and 36-inch gauge).
Asphalt kettles.	Mixers (1 and 8 bag).
Bollers (steam).	Pipe (water).
Buckets (clam shell and orange peel).	Pumps.
Cars (steel, flat and side dump).	Plows.
Cranes (locomotive).	Railroad rail (industrial).
Derricks (stiff leg).	Rollers (10-ton).
Engines (hoist and swinging).	Scrapers (wheel and slip).
Forges (portable).	Trucks (automobile, 1 to 6-ton).
Graders (blade).	Trailers.
	Wagons (sprinkling and dump).

A large number of motor trucks of various makes and sizes were placed out for rental as follows:

June 30, 1920, to Jan. 1, 1921.	Jan. 1, 1921, to Dec. 31, 1921.
115 Trucks to contractors.	40 Trucks to contractors.
95 Trucks to institutions.	100 Trucks to institutions.
256 Trucks to counties.	275 Trucks to counties.
112 Trucks to highway bureaus or districts.	130 Trucks to highway bureaus or districts.



Core drill used to remove cylindrical specimens from pavements; allows careful inspection of quality and thickness of concrete. Specimens are tested for compressive strength.



Machines used in experiments in "fatigue concrete." Loads are applied to beams by the wheels, which revolve. The number of applications of load is registered and at the rupture of a beam the machine automatically stops.

The reader's attention is called to the number of passenger cars received from the Government and their estimated value to the State of Illinois in construction and maintenance of the highways.

PASSENGER CARS IN SERVICE.

June 30, 1920, to Jan. 1, 1921.	Jan. 1, 1921 to Dec. 31, 1921.
57 Cars in service.	108 Cars in service.
\$59,850.00 represents estimated service value of cars at \$7.00 per day.	\$226,800.00 represents estimated service value of cars at \$7.00 per day.

The Division of Highways was in possession of a small amount of machinery before the surplus war materials were received from the Government. The estimated commercial value of the various pieces of machinery, repair parts, etc., received from the United States Government may be given as follows:

June 30, 1920, to Jan. 1, 1921.	Jan. 1, 1921, to Dec. 31, 1921.
\$3,019,764.22.	\$1,509,882.10.
Total value to date—\$4,529,646.32.	

The State of Illinois has received material benefits either by cash receipts or estimated rental value, and the following statement in regard to receipts and expenditures are made upon this basis:

June 30, 1920, to Jan. 1, 1921.	Jan. 1, 1921, to Dec. 31, 1921.
Cash items..... \$ 38,718.74	Cash items \$ 53,188.72
Non-cash items.....	Non-cash items..... 24,292.50
Miscellaneous items.... 404,174.38	Miscellaneous items.... 951,191.20
Total income for Bureau of Machinery.. \$442,893.12	Total income for Bureau of Machinery.. \$1,028,672.42
Expense in handling, storage, shipping and maintaining equipment 142,613.20	Expense in handling, storing, shipping and maintaining equipment 294,067.22
Leaving as a net operating profit for Bureau of Machinery \$300,279.92	Leaving as a net operating profit for Bureau of Machinery \$734,605.20

In going through the records, it could be assumed from the data at hand that at least 50 per cent of the surplus materials are used in various ways in the building and maintenance of the State highways. Other materials are being used by the various State institutions and departments in road building improvements in and about the institution premises.

BUREAU OF AUDITS.

STATEMENT SHOWING THE CONDITION OF APPROPRIATIONS FOR THE PERIOD BEGINNING JULY 1, 1920, AND ENDING DECEMBER 31, 1920.

FIFTY-FIRST OMNIBUS APPROPRIATION.	
Overdraft June 30, 1920.....	\$ 651.41
Available July 1, 1920.....	95,690.00
Total available July 1, 1920.....	\$95,038.59
Expended July 1, 1920, to December 31, 1920.....	47,498.70
Balance available December 31, 1920.....	\$47,539.89

STATE AID APPROPRIATION.	
Balance available June 30, 1920.....	\$500,160.41
Available July 1, 1920.....	300,000.00
Total available July 1, 1920.....	\$800,160.41
Expended July 1, 1920, to December 31, 1920.....	338,804.41
Balance available December 31, 1920.....	\$461,356.00

FEDERAL AID APPROPRIATIONS.	
Made from Road Fund 1917-1918.....	\$ 1,326,000.00
Made from Road Fund 1919-1920.....	14,500,000.00
Total State funds appropriated.....	\$15,826,000.00
Made from United States Government allotments:	
Total allotment.....	\$12,024,266.96
Less cash not received.....	6,675,188.99
Total allotment received in cash.....	5,349,077.97
Total available appropriations.....	\$21,175,077.97
Less expenditures to December 31, 1920.....	15,277,477.62
Balance available December 31, 1920.....	\$5,897,600.35
NOTE—The item "Cash Not Received" represents the amount which will be due the State from the United States Government upon final completion of existing projects. No payments are made by the United States Government until the work is actually completed and paid for by the State.	

STATEMENT SHOWING THE CONDITION OF APPROPRIATIONS FOR THE PERIOD BEGINNING JANUARY 1, 1921, AND ENDING DECEMBER 31, 1921.

FIFTY-FIRST OMNIBUS APPROPRIATION.	
Balance December 31, 1920.....	\$47,539.89
Available July 1, 1921.....	
Total available July 1, 1921.....	\$47,539.89
Expended January 1, 1921, to September 30, 1921.....	40,735.46
Lapsed October 1, 1921.....	\$6,804.43

FIFTY-SECOND OMNIBUS APPROPRIATION.	
Available July 1, 1921.....	\$96,750.00
Expended January 1, 1921, to December 31, 1921.....	56,554.81
Balance available December 31, 1921.....	\$40,195.19

STATE AID APPROPRIATION.	
Balance December 31, 1920.....	\$461,356.00
Available July 1, 1921.....	
Total available July 1, 1921.....	\$461,356.00
Expended January 1, 1921, to December 31, 1921.....	248,088.68
Balance available December 31, 1921.....	\$213,267.32

STATE HIGHWAYS APPROPRIATION.	
Available July 1, 1921.....	\$20,000,000.00
Expended January 1, 1921, to December 31, 1921.....	4,526,651.22
Balance available December 31, 1921.....	\$15,473,348.78

STATE BOND APPROPRIATION.	
Available July 1, 1921.....	\$4,709,477.78
Expended January 1, 1921, to December 31, 1921.....	2,469,000.65
Balance available December 31, 1921.....	\$2,240,477.13

HIGHWAY MAINTENANCE APPROPRIATION.	
Available July 1, 1921.....	\$3,000,000.00
Expended January 1, 1921, to December 31, 1921.....	225,737.08
Balance available December 31, 1921.....	\$2,774,262.92

DIVISION OF HIGHWAYS.

303

COUNTY REFUNDS APPROPRIATION.

Available July 1, 1921.....	\$6,753,672.10
Expended January 1, 1921, to December 31, 1921.....	719,273.18

Balance available December 31, 1921.....	\$6,039,398.92
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NOTE.—The amount shown as available July 1, 1921, as State bond appropriation of \$4,709,477.78 is the amount derived including accrued interest from the sale of \$5,000,000.00 of State highway bonds.

FEDERAL AID APPROPRIATIONS.

Made from Road Fund 1917-1918.....	\$ 1,326,000.00
Made from Road Fund 1919-1920.....	14,500,000.00

Total State funds appropriated.....	\$15,826,000.00
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Made from United States Government allotments:

Total allotment	\$12,024,266.96
Less cash not received.....	3,235,192.75

Total allotment received in cash.....	8,789,074.21
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Total available to September 30, 1921.....	\$24,615,074.21
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Less expenditures to September 30, 1921.....	23,059,668.70
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Lapsed October 1, 1921.....	\$1,555,405.51
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NOTE.—The item "Cash Not Received" represents the amount which will be due the State from the United States Government upon final completion of existing projects. No payments are made by the United States Government until the work is actually completed and paid for by the State. The amounts received from the United States Government after October 1, are deposited in the road fund from which the new appropriation called "State Highway" is payable.

The amount shown as lapsed on October 1, 1921, is merely a "book lapse" since same is taken up in the new "State Highway Appropriation."

DIVISION OF PARKS.

FRANK D. LOWMAN, *Superintendent.*

For some years there has been a notable movement on the part of the National Government and many of the states to acquire for the benefit of the people, areas of land which are noted for beauty of scenery or historic interest. Four million acres, in thirteen different localities, have now been set aside by the National Government for park purposes.

But the people in a number of states have been more directly benefited through the establishment of state parks. Among the states which have been conspicuous in their legislation for this purpose are New York, California, Wisconsin, Massachusetts, Michigan, Ohio and Illinois.

Illinois is developing a comprehensive system of State parks. The movement had its feeble beginning within the last decade. Until four years ago the parks owned by the State were administered by a commission which scattered its efforts. The supervision of parks is now in the hands of the Department of Public Works and Buildings which at the request of Governor Small, is mapping out a progressive program.

The Illinois plan has as its end the improvement or reclamation of every important spot in the State that is hallowed by historic memories. Many such places have been taken over by the State and no effort is being spared to preserve them in their original grandeur. The historic spots now under the supervision of the Department of Public Works and Buildings are: Lincoln Monument, Lincoln Homestead, Vandalia Court House, Douglas Monument, Fort Massac, Fort Chartres, Old Salem Park and Starved Rock Park. The newest accessions in park properties are: Metamora Court House, in Woodford county; site of Fort Creve Coeur, near Peoria, and a site in the city of Dixon on which was located the block house in which Abraham Lincoln was quartered as a soldier during the Black Hawk War. Agitation is on foot for the purchase of several historic and scenic spots, among which are: The White Pine Forest in Ogle county and Cahokia Mounds, a short distance from East St. Louis. The total appropriation of the Fifty-second General Assembly for improvements and maintenance of State parks is \$151,000.

An appropriation of \$15,000 was made by the last General Assembly for the acquisition and improvement of property adjoining the Lincoln Homestead in the city of Springfield. The homestead is filled with visitors daily during the hours it is opened to the public.

More than usual pains have been taken in the repairs and maintenance of Lincoln Monument. The shrine draws interested travelers

from all over the world. From the record kept by the custodian the number averages 2,000 per month.

The old State Capitol at Vandalia has been taken over by the State, pursuant to an act of the legislature. Vandalia is located on the Old National Trail, an important artery of travel from East St. Louis to Marshall across the State, thus affording easy access to this historic spot. As Fayette county is still using this building as a court house at an annual rental of \$3,000 per year, no work has been done on the building. It is the intention of the department ultimately to restore the former appearance and interior arrangement of the building so far as is possible. It will be necessary to rewire the structure, install a modern heating system and provide a rest room for visitors. It is also the plan to acquire and keep in the building relics, souvenirs, etc., associated with the times when this place was the seat of the State Government.

Douglas Monument Park has been restored to good condition. A permanent custodian now has charge of its maintenance.

At Fort Massac Park, the old sea wall has been repaired and the park property protected from the inroads of the Ohio River. An appropriation of \$10,000 was made by the Fifty-second General Assembly for the purchase of additional land and its improvement for park purposes.

Further improvements at Fort Chartres are under way and a custodian will be in charge at this point during six months of the year.

The museum and custodian's cottage at Old Salem Park was dedicated by Governor Small on May 19, 1921. The exercises were attended by 5,000 visitors, the majority of whom enjoyed a splendid supper served on Old Salem Hill by the ladies of Old Salem Lincoln League. The road leading to the top of the hill has been repaired and is now in splendid condition. A large amount of work has already been done at this point and plans have been drawn for the restoration of ten or twelve log cabins which, when completed, will be furnished by the ladies of Old Salem Lincoln League in a manner harmonious with the time in which Lincoln lived there. Already this hallowed spot is drawing a large number of visitors. On Sundays it is estimated that an average of 1,000 persons make their way to this park.

STARVED ROCK.

During the past season the largest crowd of visitors was present at Starved Rock since the opening of the park. Thousands of applications for hotel accommodations are turned away weekly. The receipts from the concessions have been increased to a point where the income exceeds the operating expenses.

The new cement road through the park has been finished and affords autoists a wonderful scenic view of many of the larger canyons. The cement road leading into the park from the Utica end also has been completed recently.

Work has been started on an addition to the dining room, making it sufficiently large to care for three times as many guests as at present. A general repair program has been planned and everything will be in readiness early next spring for an even larger attendance.

Shabbona Park, although it is the property of the LaSalle County Memorial Association, will have the attention of the department for the next biennium. This park is situated in Freedom Township, fourteen miles north of Ottawa. Here fifteen white people were slain in 1832 by a band of Black Hawk Indians.

At Fort Creve Coeur a marker will shortly be erected. Fifteen acres of ground have been donated to the State. This ground has been designated by the Illinois Historical Society as the exact location of the original fort.

Metamora Court House in Woodford County has been accepted as a gift by the State. It will be preserved as a Lincoln Memorial Museum. Lincoln was a regular attendant at court in Metamora and rode the circuit until the late fifties.

When promoters of the Lincoln Highway routed the trail across the continent through Dixon perhaps they planned better than they knew. They brought it to touch the very site of the block house where Abraham Lincoln served as a soldier in the Black Hawk War in 1832. This site has been purchased by the State from the Daughters of the American Revolution.

Illinois parks are surpassed by those of no other state and the program mapped out gives promise of greater developments. The State Park movement is well started and the conservation of natural beauty spots and sites of historic interest is appealing strongly to the lover of nature and the patriotic people of Illinois.

DIVISION OF WATERWAYS.

WILLIAM L. SACKETT, *Superintendent.*

Start of construction work on the Illinois Waterway project must be recorded as the biggest achievement of the Division of Waterways for the year ending June 30, 1921.

Adequate legislative authority was obtained in 1919 from the Fifty-first General Assembly. The act was effective July 1, 1919, and immediately thereafter the Superintendent of the Division of Waterways submitted for approval of the Chief of Engineers and Secretary of War, as required by Federal statute, engineering plans developed by our Chief Engineer, M. G. Barnes.

Approval of the plans submitted under legislation in 1915 had been refused. There had been several years of bitter controversy. This was overcome and Federal Government approval obtained in March, 1920.

Work was rapidly pushed from that time in development of plans to let contracts and start actual construction. November 6, 1920, the first earth was turned at what is known as Bell's Island, west of Marseilles, for the lock at the end of the auxiliary channel to be constructed there. The contract was awarded the firm of Green & Sons Company of Chicago, at \$1,373,115, the firm being the lowest of five bidders.

The waterway project requires the improvement of the DesPlaines and Illinois Rivers between Lockport and Utica, a distance of 65 miles. Because these rivers cannot be used for that distance, navigation between Chicago and the gulf, and points on thousands of miles of inland waters of the middle west is blocked. Starting the work at Marseilles on this project visualizes the dream of a century and the great transportation asset of the middle west, the advantages of which were pointed out by those early explorers and historic characters, Joliet, LaSalle and Father Marquette, take tangible form.

The work was started with a three-year program in view. That is, with the hope the entire project might be completed within that time and opened for public use. Difficulty in obtaining right-of-way, necessitating condemnation proceedings in court, may, however, prevent this.

Considerable necessary right-of-way has already been acquired at a reasonable price as the result of negotiation, but corporation holdings present difficulties that probably can only be solved in the courts.

Plans are ready for construction of the lock at Utica, where there is now navigable water in the Illinois River, and for construction of the masonry work of the dam necessary at that point. Bids were advertised

for and received for this work Monday, November 22, 1920. There were but two bids, the lowest over two and a half million dollars, which was very much in excess of engineering estimates, and these bids were rejected.



The Illinois and Michigan Canal has 15 locks 16 feet wide by 100 feet long, with a capacity of 140 tons per lock, about equal to the average train load in 1880. It competed successfully with the railroads up to 1882.



The Illinois Waterway will have five locks 110 feet wide by 600 feet long, whose capacity will be 9,000 tons per lock, which is equal to 18 average train loads of 1920. The cost of haul by water is about one-third the railroad freight rate of 1921.

Late in January, Governor Small decided that no new work should be advertised because of the expectation that prices would be lower and construction costs would be reduced. This forecast of price conditions was correct, as shown by the following:

	Decem-ber, 1920.	June, 1921.	Reduction.	
			Actual.	Percent.
Labor per hour.....	\$ 63	\$ 52	\$ 11	18
Steel per 100 lbs. pch.....	2 95	2 00	95	32
Cement per bbl. mll.....	2 15	2 15		
Lumber per M.....	57 50	48 00	9 50	17
Gravel per ton at pit.....	40	40		

The prices for these items show a declining tendency and bottom figures are expected early in the fall of 1921.

The price of cement is largely a question of cost of coal, labor and freight rates and a sharp reduction in cement prices is looked for this year. Gravel at the pit is not much in excess of pre-war prices and little or no reduction of gravel cost at the lock sites can be expected unless freight rates are lowered.

Since Governor Small took the oath of office as chief executive of the State, January 10, 1921, additional construction plans for other points have been developed and the approval of the Federal Government obtained to proposed water power development, so that power development becomes a part of the navigation feature of the 65-mile connecting link which for years has prevented continued and uninterrupted use of the navigable waters of the State for local and through transportation of commerce. This water power means an earning to the State of from \$1,000,000 to \$1,500,000 annually and eventually will pay the cost, saying nothing of transportation benefits and lower freight rates.

A very satisfactory development of the year is a decision of the United States Supreme Court in the case of the Economy Light & Power Company. This company some years ago purchased a consider-



Starved Rock Lock, Dam and Power House as they will look when completed. able area of land and became riparian owners along the DesPlaines River from Joliet to its mouth. The company had planned water power development near the mouth of the DesPlaines River and started actual construction of a dam at that point.

The State Supreme Court, on hearing, gave an opinion favorable to the company and held the DesPlaines River was not a navigable stream.

The United States Supreme Court, on the contrary, holds the DesPlaines River is a navigable stream within the terms of the Federal Act of 1899, which gives supervision and control of the stream and requires approval of plans by the Chief of Engineers and a permit from the Secretary of War before dams or other structures could be legally placed in the stream.

Under the terms of this decision, private rights are much restricted and no potential value of the lands because of the opportunity of water power development can be asserted as against the State. The State has a statute practically the same as the Federal law upheld by the United States Supreme Court, the State statute requiring submission of plans for approval and a permit before any work can be done or structures erected in any of the streams of the State. The United States Supreme Court decision is so sweeping in character and overrules the decisions of a number of years of the Illinois Supreme Court, it is deemed advantageous to present it in full here. The opinion follows:

SUPREME COURT OF THE UNITED STATES.

No. 104. October Term, 1920.

ECONOMY LIGHT AND POWER COMPANY, <i>Appellant,</i>	}	Appeal from the United States Circuit Court of Appeals for the Seventh Circuit.
vs. THE UNITED STATES OF AMERICA.		

(April 11, 1921.)

Mr. Justice Pitney delivered the opinion of the Court.

This was a suit brought by the United States against appellant in the District Court for the Northern District of Illinois, Eastern Division, for an injunction to restrain defendant from constructing a dam in the Des Plaines river at a point in Grundy County, Illinois, without the consent of Congress or authority of the legislature of the State, and without approval of the location and plans by the Chief of Engineers and the Secretary of War of the United States. Relief was prayed upon two grounds: (1) That the river bed where the dam was being constructed was the property of the United States; (2) that the Des Plaines river was a navigable waterway of the United States, and the proposed construction of a dam therein was in violation of the Act of Congress of March 3, 1899 (ch. 425, sec. 9, 30 Stat. 1121, 1151.) The first ground was overruled by the District Court and disregarded by the Circuit Court of Appeals. We need not consider it further. The second ground was sustained by the District Court, and its final decree granting an injunction was affirmed by the Circuit Court of Appeals, 256 Fed. Rep. 792. The present appeal followed.

Section 7 of act of September 19, 1890 (ch. 907, 26 Stat. 426, 454), makes it unlawful to build any dam or other structure in any navigable river or other waters of the United States, so as to obstruct or impair navigation without permission of the Secretary of War. Section 9 of the act of March 3, 1899 (30 Stat. 1151), declares: "That it shall not be lawful to construct or commence the construction of any bridge, dam, dike, or causeway over or in any * * * navigable river, or other navigable water of the United States until the consent of Congress to the building of such structures shall have been obtained and until the plans for the same shall have been submitted to and approved by the Chief of Engineers and by the Secretary of War: Provided, that such structures may be built under authority of the legislature of a state across rivers and other waterways the navigable por-

tions of which lie wholly within the limits of a single state, provided the location and plans thereof are submitted to and approved by the Chief of Engineers and by the Secretary of War before construction is commenced
* * *

There is no contention that the consent of Congress for the building of the proposed dam has been obtained, that its construction has been authorized by the legislature of the State of Illinois, or that the location and plans have been submitted to and approved by the Chief of Engineers and the Secretary of War. The substantial defense is that the DesPlaines River, at the site of the proposed dam, which is below the City of Joliet and just above the point where the DesPlaines joins the Kankakee to form the Illinois River, is not navigable in fact and not within the description "navigable river, or other navigable water of the United States," as employed in the act of 1899.

The District Court found that there was no evidence of actual navigation within the memory of living man, and that there would be no present interference with navigation by the building of the proposed dam. The Circuit Court of Appeals did not disturb this finding (256 Fed. Rep. 792, 798.) But both courts found that in its natural state the river was navigable in fact, and that it was actually used for the purposes of navigation and trading in the customary way, and with the kinds of craft ordinarily in use for that purpose on rivers of the United States, from early fur-trading days (about 1675) down to the end of the first quarter of the nineteenth century. Details are given in the opinion of the Circuit Court of Appeals, and need not be repeated. Suffice is to say that there was a well-known route by water, called the Chicago-DesPlaines-Illinois route, running up the Chicago River from its mouth on Lake Michigan to a point on the west fork of the south branch; thence westerly by water or portage, according to the season, to Mud Lake, about two miles; thence to the DesPlaines near Riverside, two miles; thence down the DesPlaines to the confluence of that river with the Kankakee, where they form the Illinois River; thence down the Illinois to its junction with the Mississippi. During the period mentioned the fur trade was a leading branch of commerce in the western territory, and it was regularly conducted upon the DesPlaines River. Supplies in large quantity and variety, needed by the early settlers, also were transported over this route between Chicago and St. Louis and other points. Canoes and other boats of various kinds were employed, having light draft but capable of carrying several tons each, and manned by crews of six or eight men. The route was navigated by the American Fur Company regularly during a period of years down to about 1825, after which it was disused because the trade had receded to interior portions of Illinois that could be reached more conveniently with horses. Later, changes occurred in the river, due to the drainage of a swamp in the region of the portage, the clearing away of forests affecting the rainfall and the distribution of the run-off, and thus shortening the duration of the higher stages of water; the construction (under State authority) of the Illinois and Michigan Canal in 1848 and its deepening in 1866 to 1871, which diverted a part of the hill drainage toward the Chicago River; and the construction of the Sanitary and Ship Canal in 1892 to 1894.

But, in spite of these changes, the Circuit Court of Appeals finds (256 Fed. Rep. 804) that the DesPlaines River is a continuous stretch of water from Riverside (at the Chicago divide) to its mouth; and although there is a rapid, and in places shallow water, with boulders and obstructions, yet these things do not affect its navigable capacity; that the same is true of the upper part of the Illinois River above the head of steamboat navigation; and that both streams are navigable and are within the act of 1899.

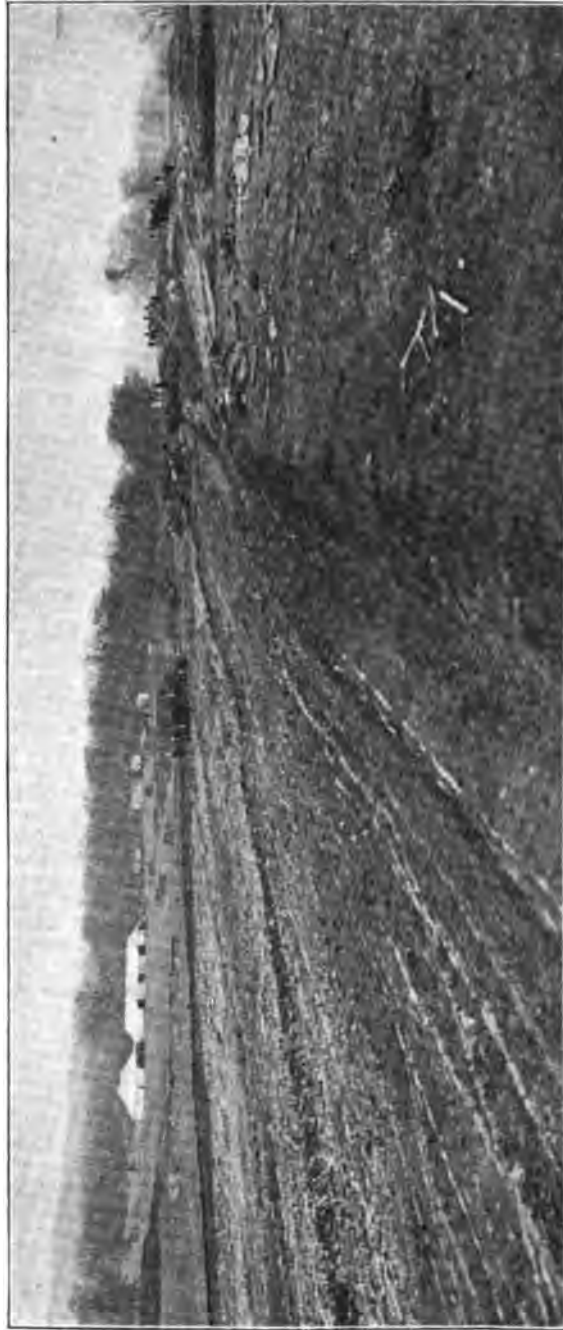
Since about the year 1835 a number of dams have been built in the DesPlaines without authority from the United States, and one or more of them still remain; besides, a considerable number of bridges of various kinds span the river. The fact, however, that artificial obstructions exist capable of being abated by due exercise of the public authority, does not prevent the stream from being regarded as navigable in law, if, supposing them to be abated, it be navigable in fact in its natural state. The authority of Con-

gress to prohibit added obstructions is not taken away by the fact that it has omitted to take action in previous cases.

The public interest in navigable streams of this character in Illinois and neighboring states, and the federal authority over such as are capable of serving commerce among the states, does not arise from custom or implication, but has a very definite origin. By article 4 of the compact in the ordinance of July 13, 1787, for the government of the territory northwest of the river Ohio, it was declared: "The navigable waters leading into the Mississippi and Saint Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said territory, as to the citizens of the United States, and those of any other states that may be admitted into the confederacy, without any tax, impost, or duty therefor." 1 Stat. 51, 52, note; Rev. Stat. U. S., 1878 ed., pp. 13, 16. This was under the Confederation; but the first Congress under the new Constitution expressed a design to have it continue in full effect, in the act of August 7, 1789 (Ch. 8, 1 Stat. 50.) A purpose to preserve the rights of public highway in the navigable rivers was again manifested in Sec. 9 of act of May 18, 1796 (Ch. 29, 1 Stat. 464, 478.) The Territory of Indiana (including what is now Illinois) was set apart and organized by act of May 7, 1800, which in section 2 reiterated that purpose (Ch. 41, 2 Stat. 58, 59); and in an act providing for the disposal of the public lands therein (act of March 26, 1804, Ch. 35, Sec. 6; 2 Stat. 277, 279-280), it was again declared "that all the navigable rivers, creeks, and waters, within the Indiana Territory, shall be deemed to be and remain public highways." Illinois was set apart and a separate territorial government established therein by act of February 3, 1809, (Ch. 13, 2 Stat. 514.) By Sec. 2, the government was to be "in all respects similar" to that provided by the ordinance of 1787 and the act of August 7, 1789, and the inhabitants were to enjoy all the rights, privileges, and conditions granted by the ordinance. An act to enable the people of Illinois to form a State government, approved April 18, 1818, (Ch. 67, 3 Stat. 428), contained a proviso (Sec. 4, p. 430), that such government should not be repugnant to the ordinance of 1787. The State Constitution declared its purpose to be consistent with the ordinance, and the resolution of Congress declaring admission of the State into the Union (December 3, 1818, 3 Stat. 536), acknowledged that the Constitution and State government were "in conformity to the principles of the articles of compact" in the ordinance of 1787.

There can be no doubt that the waters of the Chicago-DesPlaines-Illinois route "and the carrying places between the same" constituted one of the routes of commerce intended by the ordinance, and the subsequent acts referred to, to be maintained as common highways. It did not make them navigable in law unless they were navigable in fact, but declared the public rights therein so far as they were navigable in fact; and it is curious and interesting that the importance of these inland waterways, and the inappropriateness of the tidal test in defining our navigable waters, was thus recognized by the Congress of the Confederation more than eighty years before this court decided *The Daniel Ball*, 10 Wall. 557, 563, and more than sixty years before *The Propeller Genesee Chief vs. Fitzhugh*, 12 How. 443, 455.

To the extent that it pertained to internal affairs, the ordinance of 1787—notwithstanding its contractual form—was no more than a regulation of territory belonging to the United States, and was superseded by the admission of the State of Illinois into the Union "on an equal footing with the original states in all respects whatever." *Permoli vs. First Municipality*, 3 How. 589, 610; *Van Brocklin vs. State of Tennessee*, 117 U. S. 151, 159; *Hawkins vs. Bleakly*, 243 U. S. 210, 217. But, so far as it established public rights of highway in navigable waters capable of bearing commerce from state to state, it did not regulate internal affairs alone, and was no more capable of repeal by one of the states than any other regulation of interstate commerce enacted by the Congress; being analogous in this respect to legislation enacted under the exclusive power of Congress to regulate commerce with the Indian tribes. *Pollard's Lessee vs. Hagan*, 3 How. 212, 229-230; *Ex parte Webb*, 225 U. S. 663, 683, 690-691; *United States vs. Sandoval*, 231 U. S. 28, 38.



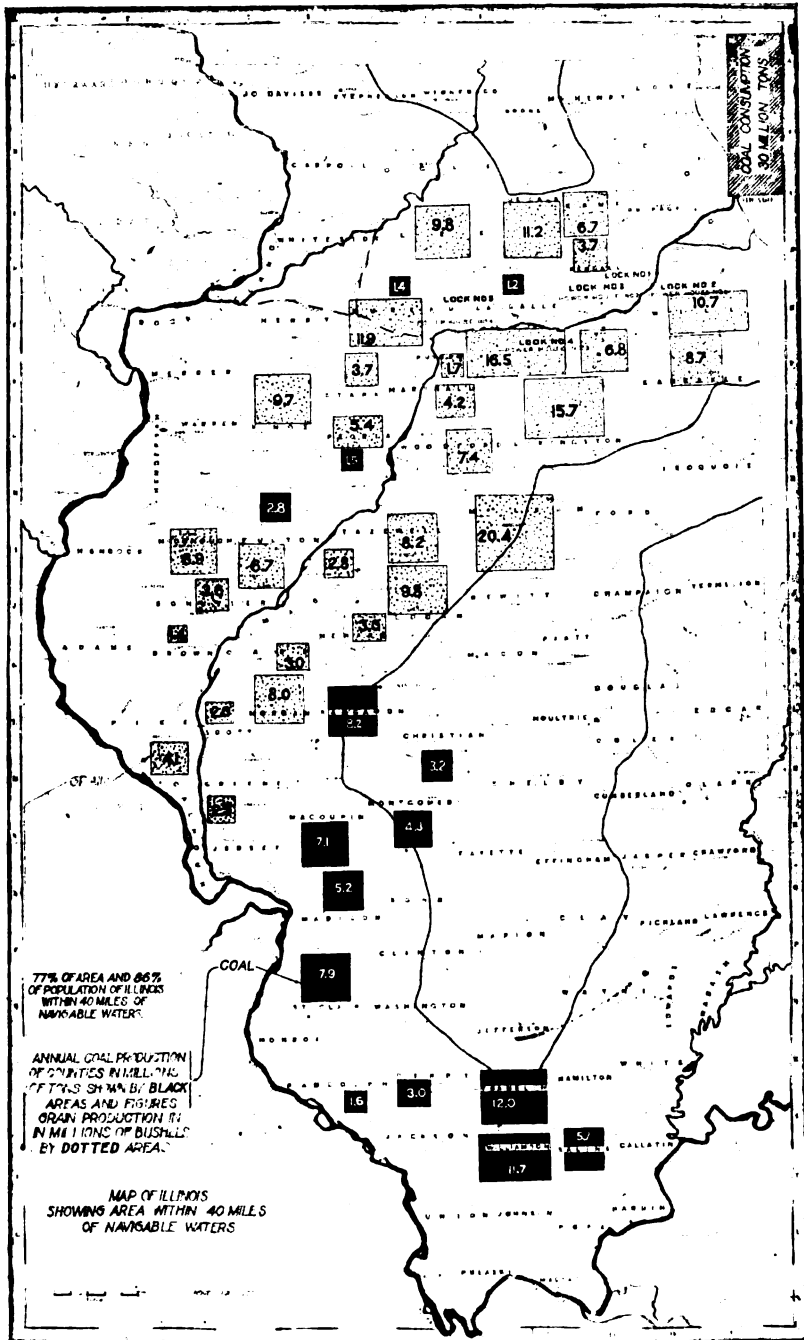
Marseilles Lock Site—Progress of condition November 26, 1920, one month from date of contract.

Nothing inconsistent with this was decided in *Escanaba Co. vs. Chicago*, 107 U. S. 678, 688-689; *Huse vs. Glover*, 119 U. S. 543, 546; *Sands vs. Manistee River Imp. Co.*, 123 U. S. 288, 295, 296; *Williamette Iron Bridge Co. vs. Hatch*, 125 U. S. 1, 8-11. Those cases simply hold, in effect, that a state formed out of a part of the Northwest Territory has the same power to regulate navigable waters within its borders that is possessed by other states of the Union; that is to say, until Congress intervenes, the power of the state locally exerted, is plenary; nevertheless, where the navigation serves commerce among the states or with foreign nations, Congress has the supreme power when it chooses to act, and is not prevented by anything the states may have done, from assuming entire control in the matter. In short, that the rule laid down in *Willson vs. Black Bird Creek Marsh Co.*, 2 Pet. 245, 252, and *Gilman vs. Philadelphia*, 3 Wall. 713, 731, applies to states formed out of the Northwest Territory as well as to others. This is not questioned. But, as was recognized in the *Gilman* case (p. 731), Congress may exercise its authority through general as well as through special laws, its power in either case being supreme. The act of 1899 (30 Stat. 1151), upon which the present bill is founded, is a due assertion of the authority of Congress over all navigable waters within its jurisdiction; and it must be accorded due weight as such.

The Circuit Court of Appeals, in passing upon the question of navigability, correctly applied the test laid down by this court in *The Daniel Ball*, 10 Wall. 557, 563; and *The Montello*, 20 Wall. 430, 440-443; that is, the test whether the river, in its natural state, is used, or capable of being used as a highway for commerce, over which trade and travel is or may be conducted in the customary modes of trade and travel on water. Navigability, in the sense of the law, is not destroyed because the watercourse is interrupted by occasional natural obstructions or portages; nor need the navigation be open at all seasons of the year, or at all stages of the water.

In *The Montello*, supra, the question was whether Fox River, in the state of Wisconsin, was a navigable water of the United States within the meaning of the acts of Congress. Originally there were rapids and falls in the river, but these had been obviated by locks, canals, and dams, so as to furnish an uninterrupted water communication for steam vessels of a considerable capacity. It was argued (p. 440) that although since these improvements the river might be considered as a highway for commerce conducted in the ordinary modes, it was not so in its natural state, and therefore not navigable under the decision in *The Daniel Ball*, supra. The court, accepting navigability in the natural state of the river as the correct test, proceeded to show that, before the improvements resulting in an unbroken navigation, and when a few portages were necessary, a large and successful interstate commerce had been carried through the river by means of Durham boats; and, speaking by Mr. Justice Davis, proceeded to say (p. 441) that, even aside from the ordinance of 1787, "The true test of the navigability of a stream does not depend on the mode by which commerce is, or may be, conducted, nor the difficulties attending navigation. If this were so, the public would be deprived of the use of many of the large rivers of the country over which rafts of lumber of great value are constantly taken to market. It would be a narrow rule to hold that in this country, unless a river was capable of being navigated by steam or sail vessels, it could not be treated as a public highway. The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of a river, rather than the extent and manner of that use. If it be capable in its natural state of being used for purposes of commerce, no matter in what mode the commerce may be conducted, it is navigable in fact, and becomes in law a public river or highway." Proceeding to say (p. 442) that notwithstanding the fact that before the improvements there were obstructions to an unbroken navigation, which rendered the navigation difficult and prevented the adoption of modern agencies, commerce was successfully carried on, the court pointed out (p. 442) that the ordinance of 1787 recognized "carrying places" as a part of a navigable waterway.

Our attention is called to the fact that in *The People vs. Economy Power Co.*, 241 Ill. 290, 320-338, the Supreme Court of Illinois held that the Des-



Plaines in its natural condition is not a navigable stream; and it is intimated that we ought to follow that decision. A writ of error brought to review it was dismissed by us because no federal question was involved (234 U. S. 497, 510, 524.) Of course, the decision does not render the matter *res judicata*, as the United States was not a party. The District Court in the present case treated it as not persuasive, because it appeared that evidence was wanting which is present here; and we cannot say that the court below erred in not following it.

We concur in the opinion of the Circuit Court of Appeals that a river having actual navigable capacity in its natural state and capable of carrying commerce among the states, is within the power of Congress to preserve for purposes of future transportation, even though it be not at present used for such commerce, and be incapable of such use according to present methods, either by reason of changed conditions or because of artificial obstructions. And we agree that the provisions of Sec. 9 of the act of 1899 (30 Stat. 1151) apply to such a stream. The act in terms applies to "any navigable river, or other navigable water of the United States"; and, without doing violence to its manifest purpose, we cannot limit its prohibition to such navigable waters as were, at the time of its passage, or now are, actually open for use. The DesPlaines River, after being of practical service as a highway of commerce for a century and a half, fell into disuse, partly through changes in the course of trade or methods of navigation, or changes in its own condition, partly as the result of artificial obstructions. In consequence, it has been out of use for a hundred years; but a hundred years is a brief space in the life of a nation; improvements in the methods of water transportation, or increased cost in other methods of transportation may restore the usefulness of this stream; since it is a natural interstate waterway, it is within the power of Congress to improve it at the public expense; and it is not difficult to believe that many other streams are in like condition and require only the exertion of federal control to make them again important avenues of commerce among the states. If they are to be abandoned, it is for Congress, not the courts, so to declare. The policy of Congress is clearly evidenced in the act of 1899, and, in the present case at least, nothing remains but to give effect to it.

It is contended that, supposing the DesPlaines is navigable, the purpose of the act of 1899 was in effect accomplished because appellant or its predecessor, before proceeding with the enterprise, submitted the plans for the proposed dam to the War Department, and that department "in substance gave its approval," although it did not formally approve the plans because it did not consider the DesPlaines River a navigable water of the United States. It appears, however, that there was no application for an approval under the act of 1899, and the department was not called upon to exercise its jurisdiction under that act. There was an informal hearing before the secretary, at which the representatives of appellant, assuring him that the DesPlaines was not a navigable stream either in law or in fact, and that the department had no jurisdiction over it, asked not for a permit, but in effect for an assurance that no permit was necessary. The secretary declined to act because, as the river was not navigable, he had no jurisdiction. We cannot regard this as equivalent to an approval, either in form or effect, or even as an official inquiry into the navigability of the river.

Decree affirmed.

Mr. Justice McReynolds took no part in the consideration or decision of this case.

During Governor Small's administration, too, the Division of Waterways has had opportunity in the development of plans and a study of comparative costs of transportation to determine that the waterway project will give the State of Illinois and its people one of the greatest transportation advantages from standpoint of cost possessed by any state or country in the world.

No other State in the Union has more natural advantages for water transportation than Illinois. It is the lowest in elevation of any of the interior states and even lower than Kentucky, Tennessee or Arkansas, and all its main streams can easily and cheaply be made navigable. Its low elevation carries a moderate climate which will make navigation possible as far north as Chicago, except during unusually severe winters.

The key to this potential State waterway system is the Illinois Waterway which is the connecting link between the Great Lakes-St. Lawrence system and the Mississippi River system. The latter system embraces 15,000 miles of inland waterways on the banks of which are many great cities such as Pittsburgh, Cincinnati and Louisville on the Ohio, Nashville and Chattanooga on the Tennessee, New Orleans, St. Louis and the "Twin Cities" on the Mississippi and others. With cheap water transportation between such large commercial centers it requires no argument to convince any reasonable individual that the completion of the Illinois Waterway will mark another epoch in population increase in the State and perhaps make it the most important of the nation.

Transportation costs are a tax on industry and communities possessing low transportation costs have a great economic advantage over their less fortunate neighbors. Today the coast states are profiting at the expense of the central west, particularly Illinois, because of cheap water transportation via the Panama Canal. Transcontinental railroads must give lower through freight rates to meet the competition of the coastwise water rates.

Illinois will participate in these advantages to the fullest extent when the North and South water highway is made available to New Orleans thence to South America, the Pacific coast and the Orient.

Corn is the largest crop in Illinois and the foreign consumption of corn is steadily increasing, but today Argentine, a great corn producing country, can deliver corn at New Orleans for an ocean rate of 10 cents per bushel whereas the rail rate from central Illinois to New Orleans is 24 cents. This differential of 14 cents per bushel in favor of Argentine corn can only be overcome by cheap water rates.

Illinois produces annually 70,000,000 tons of coal within 40 miles of navigable water and Chicago consumes 30,000,000 tons. The rail rate on this coal is about \$2.15 per ton. The water rate will be under \$1.50. When this coal can be brought to Chicago by water, the annual saving on coal alone will approximate \$20,000,000. In other words, the transportation saving on coal alone required by Chicago will be approximately the total cost of the waterway.

The crops produced in Illinois in 1920 within 40 miles of what will be navigable water when the Illinois Waterway project is completed were as follows in bushels: Corn, 124,000,000; oats, 70,000,000; wheat, 16,000,000; barley and rye, 3,000,000; potatoes, 2,125,000, making a total of 215,000,000. The export part of this product if shipped by water would increase the price the farmer gets by from 5 to 20 cents

per bushel. It is a well known fact that the local price of grain agrees very closely with the Liverpool price less the transportation cost to Liverpool, and therefore when we make possible cheap water transportation through the Illinois Waterway the farmers of the State will benefit by approximately the amount the freight rate is lowered.

Illinois imports great quantities of commodities through New Orleans, Chicago alone using 200,000 tons of sugar, 30,000 tons of coffee and 40,000 tons of rice. When these articles can be shipped direct by water Illinois will benefit by at least \$10 per ton or about \$3,000,000 per year. This year a local water transport firm was offered a contract for transporting 200,000 tons of sugar from New Orleans to Chicago which it of course had to decline, because of the interrupted navigation between Lockport and Utica.

At present Chicago and northern Illinois have to pay prices for sand and gravel that are higher than other points throughout the country. An abundance of these materials are within a stone's throw of the waterway and when the latter is completed water transport competition will lower the present prices by 50 cents to \$1 per cubic yard.

The best and most sought after silica sand in the United States for the steel industry is located on the waterway and millions of tons of this sand will seek the cheap water rates.

The Government is operating a regularly scheduled barge service on the Mississippi River between New Orleans and St. Louis and the railroads in Illinois and other specified territory are compelled to accept shipments via this barge line and issue through bills of lading to New Orleans. The joint rates are 20 per cent less than the through rail rates. This 20 per cent saving in rates is entirely due to the operation of the barge line on the Mississippi and the barge line is tendered more freight than it can carry and has been operating this year to its capacity at a very material profit. It has transported more than 200,000 tons in five months and not only saved in freight cost, but made much faster time than by rail.

Firms of Chicago and other cities of the State, several of which are noted below, are availing themselves of this service for export and import business through the port of New Orleans in order to profit by the 20 per cent rate reduction. One company is importing this year 250,000 bales of sisal for making twine and between January and July, 1921, has exported some 400 carloads of implements via the barge line. Another company during March, April and May, 1921, imported from Calcutta, India, 19,000,000 pounds of burlap at a saving in freight rates of \$16,000, due to the barge line portion of the routing.

A constant stream of shipments are now moving via this barge line service, including canned goods, books, machines, bath tubs, glucose and other articles to Memphis, New Orleans, Pacific Coast points, South America, Europe and the Orient.

When the Illinois Waterway is completed such shipments will not have to be transferred between barges and railroads at East St. Louis, but can move the entire distance to the Great Lakes by water and make possible a further reduction in freight rates and a saving in time. Opportunity to ship by water within a trucking distance of 40 miles means but little more of an average haul than a farmer has at present from his farm to the railway, and the lower water rate will pay the extra truck mileage and still give the farmer an extra profit on his products.

The common belief that water shipments are much slower than by rail is not founded on fact. On the water there are no delays due to lay-overs at sidings, change of train crews, or hours, days or weeks lost in yards and terminals. Through boats keep moving 24 hours a day and average 75 to 200 miles per day between terminals, whereas, the average daily travel of freight cars in the United States is under 25 miles per day. Railroads have reached a limit on terminals, while the rivers and lakes are open and free. Large fleets of barges move from New Orleans to St. Louis in 11 days and in the reverse direction in 7 or 8 days, while packet boats carrying high class freight and express matter make the trip in four to five days.

The use which Illinois shippers are now making of the Mississippi River barge service clearly indicates that a large and constantly growing traffic will be developed when a through waterway is available from Chicago to New Orleans.

For many years railroad opponents of the waterway have pointed out that its development was merely of sectional advantage and would benefit only the communities located directly upon its route.

This argument is no longer tenable. The map herewith shows when the stretch of rivers has been improved to permit of continuing navigation from the Lakes-to-the-Gulf, 77 per cent of the area of Illinois and 86 per cent of its entire population will be within 40 miles of navigable water. If the distance were 50 miles instead of 40, practically every part of the State is within trucking distance of the navigable water that will be open to the operation of boats carrying the commerce of the State. With improved highways, now being rapidly constructed throughout the State, this maximum truck haul will be insignificant.

For 20 years past not only manufacturers, but farmers in particular, have been unable to move their products because of "car shortage." Lack of cars cost the farmers of Illinois within the last two years billions in crop losses on a declining price market. It is plain the railroads cannot handle the commerce of the country. The country needs railways, but also now needs the waterways and better highways.

The additional opportunity of transportation the waterway will give the farmers throughout almost the entire area of Illinois will mean a saving in transportation cost of at least 5 cents a bushel or approxi-

mately \$10,000,000 annually. This means more money to the farmer and lower prices to the consumer.

For years representatives of railroads have also appealed to the people to oppose waterway development by claiming railroads were self sustaining while great sums have been appropriated to waterway maintenance and construction from the public treasury, and that waterways meant a tax upon the people.

Few people know that the railroads of this country have received in land grants from the Federal Government more than one acre in twelve of all the land in the United States, this total being equal to the area of the thirteen original states, with Georgia omitted, and greater than the area of Belgium, Denmark and Switzerland combined with France, or the old German Empire.

Operation of railways has not been entirely successful in spite of claims to the contrary. How much of this has been due to stock manipulation and other abuses is a matter of conjecture. Railroad failures are greater than waterways. Between 1883 and 1915 over 60 per cent in mileage of the railways in the United States has failed, and were placed in the hands of receivers. On December 31, 1917, 82 railroads of the United States were in the hands of receivers. Domestic and foreign commerce of the United States is suffering for want of proper transportation which cannot, and has not for years, been given by railways, and today excessive rates for rail hauling is one of the greatest industrial handicaps of history. Every farmer knows his losses. Every manufacturer in the middle west his handicap because of high freight rates.

More than this, definite Federal Government appropriations to the railways of the country within the last three years exceeds three billions of dollars—a direct tax upon the people of the country in addition to the excess freight and passenger rates being charged, saying nothing of prior appropriations, land grants and bonds people of various communities obligated themselves to pay. The appropriations for waterway improvement, including harbors at seaports, has been insignificant in comparison. Railroads are also claiming damages of seven billion dollars more which the people must pay—damages alleged to have been suffered because of Government operation during the war.

Opponents of waterway development and use, more often connected with railway interests than otherwise, and seeking to prevent competition which may be conceded as a business precept, often ask "why are not the rivers used now for transportation? They used to be but you don't see boats on them any more!"

During the period from 1885 to 1905 the railways progressed and bitterly fought all water competition. They resorted to unscrupulous rate cutting and bribery by means of rebates and free passes. It is a matter of common knowledge that conditions became such as to force the enactment of regulatory legislation in behalf of the public.

Railways did more than that. Many doubtless will be surprised to know that railways when they found a cargo was to be shipped by boat, not only offered, but in fact, carried it for nothing to "freeze out" the boat: bought up terminal and landing space and " " " "



provide that additional means of transportation, because of extreme high cost of marketing the products of manufacturers. Arrangements were made for a trip from Chicago to Peoria. The trip was made by boat

from Chicago to Joliet by using the Sanitary District Channel. Because of the interruption in navigation for lack of the waterway between Joliet and Utica, the trip was made from Joliet to that point by rail. At LaSalle the journey was again resumed by boat, it being possible to navigate the Illinois River from LaSalle throughout the entire course of the river and on to the gulf.

In the delegation of nearly two hundred representatives of various cities all over the State there were a number who had little conception of water commerce provided by the Illinois River, and when they discovered the size of boats already navigating this river and the freight tonnage that could be carried they became insistent in their demands for the completion of the connecting link so that commerce could be carried through to Chicago and the lakes.

The picture herewith shows the delegation after an inspection of the work at the lock west of Marseilles, on the south side of the Illinois River, just prior to taking the car from that point to resume their journey by boat from LaSalle to Peoria.

Detailed engineering report of work for the year on waterway project by M. G. Barnes, Chief Engineer, follows:

ENGINEERING REPORT UPON THE ILLINOIS WATERWAYS.

M. G. BARNES, *Chief Engineer, Division of Waterways.*

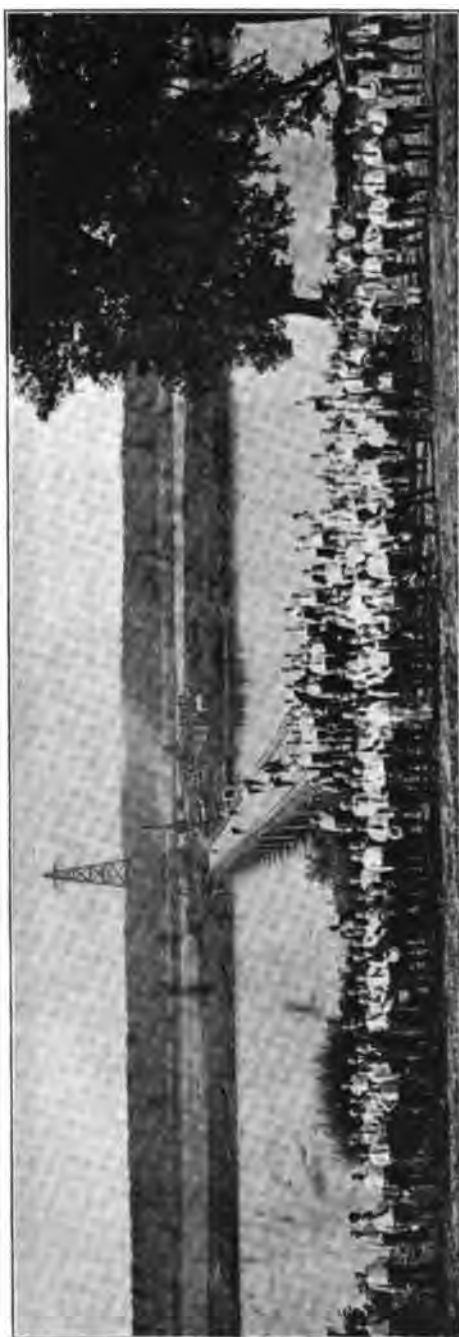
During the fiscal year July 1, 1920, to June 30, 1921, the engineering work for the Illinois Waterway has consisted mainly in the continuation of studies of various problems and preparation of designs for structures and the completion of the principal contract plans for the locks and appurtenant concrete structures all of which have been completed except for the Brandon Road-Joliet location, which is about 50 per cent completed.

Owing to the decision not to press the letting of contracts for construction work during the period of high prices, it has not been necessary to materially increase the engineering force during the year. The responsible personnel as given in detail in the last annual report is unchanged. At the end of the last fiscal year the total personnel for the Chicago office and the field was 13 each and the number on June 30, 1921, was 17 and 11 respectively.

OFFICE WORK ACCOMPLISHED.

Marseilles Lock.—The plans and specifications for this lock were completed in the fiscal year 1919-20.

This work known as Contract No. 1 was advertised on September 16, 1920, the bids publicly opened on October 18 and the contract awarded to the low bidder, Green & Sons Co. of Chicago on October 26, 1920. A tabulation of the bids received is as follows:



Delegates from Illinois Chamber of Commerce visiting Marselles Lock site, June 16, 1920.

ILLINOIS WATERWAY CONTRACT NO. 1—(Canvass of bids received October 18, 1920.

Item No.	Item.	Unit.	Quantities.	Bates & Rogers Construction Co., 37 W. Van Buren St., Chicago, Ill.		Witherspoon Eng- lar, Grant Smith & Co., 53 W. Jack- son Blvd., Chicago, Ill.		Green & Sons Co., 593 McCormick Bldg., Chicago, Ill.		Oscar Daniels Co., 1st Nat'l Bank Bldg., Chicago, Ill.		Thompson Black & Co., 600 Bell Tel- ephone Bldg., Chi- cago, Ill.	
				Price.	Amount.	Price.	Amount.	Price.	Amount.	Price.	Amount.	Price.	Amount.
A	Clearing.....	Lump sum	1	.....	\$ 7,650 00	.....	\$ 1,570 00	.....	\$ 10,000 00	.....	\$ 12,000 00	.....	\$ 5,000 00
B	Cofferdams, pumping, etc.	Cu. yd.	263,000	2 00	526,000 00	2 63	691,690 00	2 00	526,000 00	2 63	691,690 00	3 98	1,046,740 00
C	Excavation.....	Sq. ft.	10,000	1 00	10,000 00	50	5,000 00	1 00	10,000 00	50	5,000 00	2 00	20,000 00
D	Channeling.....	Sq. yd.	2,400	1 20	2,880 00	2 28	5,472 00	1 00	2,400 00	1 50	3,600 00	1 00	2,400 00
E	Embankment.....	Cu. yd.	1,400	3 25	4,550 00	7 95	11,130 00	3 50	4,900 00	3 50	4,900 00	4 00	5,600 00
F	Stone paving.....	Sq. yds.	50	135 00	6,750 00	200 00	10,000 00	100 00	5,000 00	80 00	4,000 00	100 00	5,000 00
G	Pine and fir timber.....	1000 ft. BM	23	185 00	4,255 00	390 00	874 00	250 00	5,750 00	400 00	9,200 00	500 00	1,150 00
H	White oak timber.....	Pounds.	128,000	18	23,040 00	1763	22,239 00	20	25,200 00	14	17,640 00	15	18,900 00
I	Structural steel.....	Pounds.	51,000	28	14,280 00	248	12,648 00	40	20,400 00	30	15,300 00	35	17,850 00
J	Steel castings.....	Pounds.	14,600	27	3,942 00	207	3,022 20	30	4,380 00	13	1,898 00	25	3,650 00
K	Gray iron castings.....	Pounds.	62,600	18 75	9,375 00	20	10,000 00	12 60	6,250 00	12 50	6,250 00	16 53	8,265 00
L	No. 1 concrete.....	Cu. yd.	89,000	13 25	83,180 00	15 93	997,218 00	10 80	676,080 00	13 00	8,000 00	15 68	981,568 00
M	No. 2 concrete.....	Cu. yd.	89,000	09	8,010 00	08	7,298 00	10 30	5,150 00	16 00	8,000 00	15 13	7,565 00
N	Portland cement.....	Barrel	1,000	3 25	3,250 00	5 50	5,500 00	2 75	2,750 00	2 50	6,230 00	075	6,675 00
O	Wire fence.....	Lin. ft.	2,500	1 00	3,375 00	1 30	3,250 00	1 00	2,500 00	70	1,350 00	2 00	1,000 00
P	Verified pipe—6" diam.....	Lin. ft.	1,800	1 00	1,800 00	1 40	2,520 00	1 00	2,500 00	90	1,350 00	1 00	2,500 00
Q	Verified pipe—3" diam.....	Pounds	1,000	80	80 00	40	40 00	1 00	1,000 00	70	1,350 00	1 00	1,000 00
R	Firebricks.....	Lin. ft.	1,000	40	40 00	50	50 00	1 00	1,000 00	45	450 00	1 00	1,000 00
S	Seedling.....	Lump sum	2	90 00	180 00	300 00	600 00	250 00	500 00	100 00	400 00	200 00	400 00
T	.....	.....	.....	.....	\$1,547,152 50	.....	\$1,823,669 20	.....	\$1,373,115 00	.....	\$1,610,588 00	.....	\$2,191,313 00

Starved Rock Lock and Dam.—Prepared and had printed the specifications and completed the plans required for the main contract at this site to be known as *Contract No. 2*. This contract was advertised on October 21 and the bids publicly opened on November 22, 1921. All bids were considered as excessively high and were therefore rejected. A tabulation of bids follows:

ILLINOIS WATERWAY CONTRACT NO. 2.
(Canvass of bids received November 22, 1920).

Item No.	Item.	Unit.	Quantities.	Thompson, Black & Co., 900 Bell Tel. Building, Chicago, Illinois.		Bates & Rogers Co., 37 W. Van Buren, Chicago, Illinois.	
				Price.	Amount.	Price.	Amount.
A	Clearing.....	Lump sum	1	-----	\$ 2,000 00	-----	\$ 720 00
B	Cofferdams, pumping, etc.....	Lump sum	1	-----	200,000 00	-----	1,167,650 00
C	Excavation.....	Cu. yd.	165,000	7 00	1,155,000 00	6 50	1,072,500 00
D	Channeling.....	Sq. ft.	6,000	1 00	6,000 00	2 00	12,000 00
E	Embankment.....	Cu. yd.	71,000	2 00	142,000 00	3 00	213,000 00
F	Stone paving.....	Sq. yd.	1,000	4 00	4,000 00	3 00	3,600 00
G	Pine and fir timber.....	1000 ft. BM	50	100 00	5,000 00	180 00	9,000 00
H	White oak timber.....	1000 ft. BM	6	400 00	2,400 00	290 00	1,740 00
I	Structural steel.....	Pound	220,000	15	33,000 00	24	52,800 00
J	Steel castings.....	Pound	53,000	35	18,550 00	32	16,960 00
Jb	Steel castings.....	Pound	53,000	33		31	
Ka	Gray iron castings.....	Pound	25,000	25	6,250 00	25	6,250 00
Kb	Gray iron castings.....	Pound	25,000	23		23	
L	Steel forgings.....	Pound	115,000	40	46,000 00	32	36,800 00
M	No. 1 concrete.....	Cu. yd.	100	16 50	1,650 00	27 50	2,750 00
N	No. 2 concrete.....	Cu. yd.	84,000	13 75	1,155,000 00	19 50	1,638,000 00
O	No. 3 concrete.....	Cu. yd.	2,000	13 15	26,300 00	21 00	42,000 00
P	Metal reinforcement.....	Pound	95,000	07	6,650 00	11	10,450 00
Q	Portland cement.....	Barrel	1,000	3 75	3,750 00	4 80	4,800 00
R	Wood fence.....	Lin. ft.	500	1 00	500 00	1 15	575 00
S	Wire fence.....	Lin. ft.	5,000	1 25	6,250 00	1 55	7,750 00
T	Vitrified pipe 6" diameter.....	Lin. ft.	2,100	1 00	2,100 00	1 20	2,520 00
U	Pipe railing.....	Pound	1,500	75	1,125 00	95	1,425 00
V	Fibre conduit, 3" diameter.....	Lin. ft.	1,100	65	715 00	45	495 00
W	Seeding.....	Acre	4	200 00	800 00	150 00	600 00
					\$2,825,040 00		\$4,304,385 00

Consultation with the bidders and other contractors developed that the main reason for the few bids and high prices was the fear of contractors that floods would destroy the cofferdams and damage their plant and unfinished work with consequential heavy financial loss against which hazard they felt obliged to protect themselves by large additions to their estimated cost if no flood hazard threatened.

To minimize such flood hazards an alternate location was made so that the main cofferdam would rest on earth instead of rock and plans completed for the alternate location. The specifications were also modified so that the State would assume the flood hazard of cofferdam destruction to the extent of renewal cost of labor and materials.

This contract has not been re-advertised on account of the prevailing high prices.

Dresden Island Lock and Dam.—The plans are complete for the main contract at this site to be known as Contract No. 3 and the specifications are ready for the printer.

Brandon Road-Joliet Structures.—From the lock site at Brandon Road through the city of Joliet is a reach of the waterway which offered several solutions each of which required careful study and estimates so that the plan finally adopted would be the best solution of this complicated problem and could be defended against criticism from any source.

During the year the studies and estimates for all the main features of this part of the project were completed and it developed that the tentative plan prepared by this office and approved by the War Department was not only the best general solution but also would cost less. This plan provides for a single high lift lock and dam at Brandon Road to maintain a pool elevation of minus 41 Chicago datum through Joliet to Lockport.

The lock, dam, dykes and channel retaining walls through Joliet if built by contract, probably will be let in one contract to be known as Contract No. 5 and the plans and specifications for same will be completed early in the next fiscal year.

Lockport Lock.—The main contract will be known as Contract No. 4 and the plans and specifications have been completed. These include three plans for the upper gates, which are of the vertical lift type, whereas all other lock gates for the entire project will be of the mitring type.

Marseilles Canal.—The plans for this work, which will be known as Contract No. 6 are 80 per cent completed and can be completed in a few days when their immediate need can be foreseen.

Marseilles Dam.—A plan has been completed for a dam to be located a short distance upstream from the present power dam.

Many studies, drawings and estimates have been made for bridges which will be required at Joliet and Marseilles.

All machinery design studies necessary in order to complete lock and dam contract plans have been made. No attempt has been made to complete machinery or miter gate and valve plans as there will remain ample time for this work after the lock contract plans are finished.

DRAWINGS COMPLETED.

During the fiscal year the following list of standard size drawings have been made as well as various sketches, studies, etc., filed with computations:

85	Original design drawings.
140	Finished tracings.
5	Partly finished tracings.
48	Drawings in connection with important studies.
21	Drawings for estimating quantities.
12	Miscellaneous drawings.
311	Total.

Computations have been completed to determine the hydraulic conditions which will occur in the completed waterway and to determine the hydro-electric power possibilities at the various dam sites and at the power sites of which private interests are claimants of power rights.

During the fiscal year 386.82 acres of right-of-way land for the Marseilles and Starved Rock structures were acquired by purchase and condemnation proceedings were instituted for the acquisition of other lands.

FEATURES OF DESIGN.

Lift Gates for Lockport Lock.—At the site of this lock the available width between the present Sanitary Canal lock and the outer side wall of the Sanitary Canal is not sufficient for the required mass of concrete to take the thrust of a miter gate and therefore after thorough study a vertical lifting horizontal truss type of gate was adopted. This gate consists of a set of horizontal trusses extending entirely across the lock, framed to a vertical truss at each end and with a skin plate on the upstream side.

Two lift gates are provided at the upper end, the usual operating gate and a guard gate to prevent down bound boats from hitting the former and possibly opening up direct water connection between the Sanitary Canal and the Joliet level 41 feet below. These gates are operated from overhead bridges carried by steel towers resting on the lock walls and their weight is balanced by concrete counterweights suspended inside the framework of the towers. The gates are lowered on the downstream side of the concrete breast walls or sills to open the lock entrance and raised to close it.

Emergency Gate, Lockport Lock.—An emergency gate which can be operated against a head is to be installed above the guard gate for the purpose of partly shutting off the flow of water if the operating gates should be destroyed. This gate consists of a large steel shutter pivoted horizontally about a line a short distance below its axis. Underneath and downstream from the lower portion of the shutter is a recess connected to the upper and lower pools by pipes and valves. By the proper manipulation of the valves the shutter can be made to rise by water pressure and shut off all flow of water except that which can flow through the filling culverts, thus making it possible to raise the vertical gates.

Roller-bearing Wheels for Valves.—All culvert valves are of the lifting gate type, 9 feet square, and will have to be operated against heavy water pressure. Such valves have usually been mounted on trains of live rollers of the Stoney type as in the Panama locks or on journal bearing wheels of the wagon or car wheel type as in the locks of the New York State Barge Canal. The latter are somewhat objectionable on account of high journal friction. The former are entirely satisfactory as regards friction and operation while new, but the roller trains

are very costly. The development of heavy duty roller bearings has progressed to such a stage that they are practicable for the loads on the Illinois Waterway culvert valves and these valves will be mounted on massive steel wheels equipped with rollers of the flexible helically wound type. These will cost less than Stoney live rollers and the friction load will not differ materially from that of new Stoney rollers and will be considerably less than Stoney rollers after several years' use as the latter corrodes more rapidly as the friction surfaces cannot be protected or lubricated.

FIELD WORK ACCOMPLISHED.

Drilling Operations.—The investigation of sub-surface conditions at the site of the Starved Rock structures by diamond drill borings under way at the beginning of the year was carried to completion on July 31, 1920, after which the drilling outfit was moved to the Brandon Road and Dresden Island sites where thorough investigations were made of the sub-surface conditions underlying the proposed structures at these places.

Marseilles Canal.—To determine the character of material and the depth to rock seven test pits were dug at intervals along the axis of the canal. The pits were about 3 feet by 5 feet in area, were dug by pick and shovel and were fenced and left open for observation by possible bidders on the contract work.

Contract No. 1.—This contract for the construction of a lock near the head of Bell's Island about two miles west of Marseilles, Illinois, was awarded on October 26, 1920, to Green & Sons Co. of Chicago who were the lowest bidders.

Actual construction work was commenced by the contractor on November 6, 1920, by way of the erection of a cook and mess building by a small force of carpenters. The first excavation was made on November 15, 1920, at 10:30 a. m. by an elevating grader outfit belonging to the New Era Construction Co., of Chicago, under a sub-contract with Green & Sons Company. Since that date, the work has been carried on continuously, fair progress having been made.

Clearing.—During the months of November and December, 1920, and January, 1921, the right-of-way was cleared of all trees and brush. The brush from the trees was burned on the site. The limb-wood was hauled to a point near the camp head quarters and sawed for use as fire-wood. The tree trunks were hauled to a point clear of the waste area and have been partially worked into track ties and rough lumber for construction use by means of a portable saw-mill.

Fencing.—A right-of-way fence for a total length of 2,500 feet was constructed, as per specifications, on the boundary separating the property of the State from that of the adjacent owners alongside the limits of Contract No. 1, except for the installation of the specified steel gates.

Excavation.—Excavation of the lock-pit and of the east approach to the lock has been carried on continuously since November 15, 1920. The elevating grader outfit of three machines with the attending dump wagons operated from the above date to December 18, when operations were stopped by frozen ground. The waste material, being top soil and clay, was used mostly for the construction of water tight bases for the proposed embankments specified. Material which was not suited for this purpose was wasted in the general waste area, mostly on the north side of the lock area. A sufficient quantity of top soil was stored in piles for future use in soiling waste area adjacent to the finished lock structures.

During the latter part of November a small rotary steam shovel was brought overland from Marseilles, Illinois, and was first used in the construction of a ditch, for the interception of surface drainage, from a point above the contract limit, south of and around the construction site and thence into the Illinois River below the lower limits of the contract. It was later used for stripping top soil from the entire lock-site and during the latter portion of the period has been used for light excavation in trimming shale to grade at the upper end of the lock.

All waste from this shovel was handled by teams and dump wagons.

During January a No. 70-C Bucyrus steam shovel was received at Streator, Illinois, was transferred to the C. O. & P. Interurban Railway and hauled to a siding southeast of Ottawa and then taken about five miles overland to the site. Warm weather caused muddy roads which interfered seriously with this operation, the shovel not being ready for work until February. Since that time this shovel has worked continuously on the excavation of blasted shale in the lock-pit, the waste having been loaded on dump cars and hauled by locomotive to the south spoil bank, which was completely filled to the edge of the excavation, excepting the cut occupied by diversion ditch, at the end of the period.

All of the shale rock encountered required blasting. For drilling the holes, a wagon drill of the Ingersoll Rand type carrying a large drilling machine was used in the beginning. Its operation was not successful in the soft shale and it was later replaced by a well drill which is now used exclusively for all deep hole drilling. Late in the period jack-hammer drills were installed for use in shallow holes in trimming excavation to neat lines and grades at the upper end of the lock. Its use has been surprisingly successful, penetration of nearly a foot per minute being possible.

About 100,623 cubic yards place measure, of top soil and shale have been excavated and wasted from the beginning of the contract to the end of the year.

Plant.—Since the beginning of the contract, work of assembling and erecting plant has been going on continuously. In addition to the excavation plant mentioned above, the contractor has erected camp

buildings in the way of offices, mess and cook buildings, bunk-houses, shops for repair work and has installed a water system for supplying feed water to boilers and also for sanitary purposes in camp. All buildings are lighted by electricity, the power being purchased from a power company in the vicinity.

To facilitate the transportation of equipment and construction materials to the work, the contractor leased a plat of ground on the north bank of the Illinois River directly opposite the site of the lock extending from the river to the C. O. & P. Railway. A spur siding was laid from the railway which was expanded into several tracks near the river bank where the concrete mixing plant is being installed. A cableway reaching across the river was erected for the transportation of miscellaneous supplies and material. A trestle was erected across the river in June over which it is proposed to haul mixed concrete in automobile trucks. The concrete mixing plant consisted, at the end of the period, of a gravel dumping trestle and bins complete except the actual installation of belt for conveyor, a framework for mixing plant with two concrete mixers installed and conveyors for cement and gravel partially installed. A locomotive crane for general use in the yard, and miscellaneous boilers and engines are on hand.

Concrete.—No concrete has been placed as yet, but several carloads of form lumber have been received and stored. Preparations are under way for the construction of portable forms, but no erection has been started.

Embankment.—Embankment to the amount of about 1,546 cubic yards of material was placed in the north and south embankments in the latter part of March and early in April by team and grader work by the New Era Construction Co., who operated for about one month on excavation in the east approach.

This contract based on the amount of money earned is 17 per cent completed. The actual quantity and percentage of work completed and the amount earned by the contractor during the fiscal year is shown by the following tabulation:

Character of work.	Completed.		Amount earned.
	Quantity.	Per cent.	
Clearing.....	All	100	\$ 10,000 00
Cofferdam.....		25	12,500 00
Excavation.....	cu. yd. 100,623	88	201,246 00
Embankment.....	cu. yd. 1,546	65	5,411 00
Wire fence.....	feet 2,400	96	2,400 00
Total.....		17	\$231,567 00

Surveys.—During the fiscal year one survey party has been at work continuously between Starved Rock and Lockport locating section lines, flow line contours, making property line surveys for deed descriptions,

topographical surveys at Joliet and at the various lock and dam sites and securing miscellaneous data on the existing bridges along the proposed waterway.

ILLINOIS AND MICHIGAN CANAL.

Because of flood damage in the spring of 1920, the Illinois and Michigan Canal could not be opened for navigation until August 1. There has been more navigation than usual on the canal, while on the Illinois River through the locks at Henry and Copperas Creek there has been a much larger tonnage than for some years. Approximately ten million pounds of freight went through both locks, a large proportion of this being molasses from New Orleans to Peoria, the balance being in grain and miscellaneous merchandise. Sixteen hundred and sixty-four passengers were carried through these locks.

The largest craft through the canal was the United States Inspection boat "Dixie" en route from Baltimore via the Great Lakes to the Mississippi River. The boat was 86 feet long, 14 feet beam with draft of 5 feet 4 inches. The boat required a greater clearance than afforded by the canal. The average draft of boat navigating the canal is 4½ feet. Notwithstanding the excess clearance and draft required by this boat it was navigated through the canal in two days. The craft came the lake route to determine whether navigation was possible and what saving of time could be made by the inland route over the ocean route via New Orleans. It was demonstrated several weeks' time could be saved, and indicates the great value to the nation of the adequate Illinois Waterway when completed, which will take boats of much larger size and draft than the "Dixie."

There was also considerable interruption to navigation on the canal during the first six months of 1921. The collapse of a culvert between Morris and Seneca prevented navigation for six weeks, and required considerable expenditure for repairs. Other structures broke down, requiring unusual expenditure and interrupted navigation. Notwithstanding this, there were 127 boats navigating the canal during the year and including boats on the Illinois River using the locks at Henry and Copperas Creek, the total number was 666.

A detailed statement of boats, clearances issued, tolls and lockage collected and tons transported on the Illinois and Michigan Canal and through Henry and Copperas Creek locks for the period from July 1, 1920, to June 30, 1921, is shown by the following:

	Copperas Creek.	Henry.	Joliet.	Ottawa.	Total.
Tolls and lockages.....	\$793 38	\$551 76	\$266 87	\$46 56	\$1,658 57
Boats cleared.....	248	276	98	27	669
Number of passengers.....	955	749	-----	-----	1,703
Tons transported.....	11,632	5,516	-----	-----	17,148

Statement of the principal articles transported upon the Illinois River, cleared at collector's office at locks, at Henry and Copperas Creek, for the year ending June 30, 1921:

Articles.	Measure.	Copperas Creek.	Henry	Total.
Wheat.....	Busbels	145,000	30,422	175,422
Corn.....	Busbels	36,500	81,779	118,279
Rye.....	Busbels	2,500	5,120	7,620
Oats.....	Busbels		68,734	68,734
Molasses.....	Pounds	8,838,016		8,838,016
Merchandise.....	Pounds	1,292,450	612,370	1,904,820
Drainage tile.....	Pounds	139,400	388,574	527,974
Autos.....	Pounds	144,100		144,100
Fence wire.....	Pounds	6,346		6,346
Lumber.....	Feet	10,000		10,000
Coal.....	Tons	645		645
Gravel.....	Tons	225		225

During the year the receipts of the canal have been \$46,285.92. The expenditures for the same period have been \$47,553.51. The receipts of the canal at the present time for tolls is not a large amount, but the money for the operation of the canal is largely obtained from the rental of land, water power and water supply and from miscellaneous charges for use of portions of the right of way at various points.

During the year several new leases of land, heretofore occupied by squatters, have been made, thus clearing the title of the State to the property without resorting to litigation. Land leases are now fixed on basis of actual value of the land. Heretofore there has been no standard basis of reaching the amount of rental to be paid, with the result there has been great variation in the charge made along the line and even at the same point. During the year one privilege for right-of-way for switch track, leased a number of years ago for twenty years at a total rental of \$1,000, has been renewed at an annual rental of \$500. What is known as the Public Landing at Ottawa has been occupied twenty-five years by squatters and the State received no revenue. During the last year the State has taken possession of the tract and it is now leased on the basis of a \$3,000 valuation. Increases have been made at other points.

There was an increase in receipts the past year, amounting to \$9,436.22. The necessity, however, of reconstruction of a large portion of the dam at Channahon, which was washed out by spring flood of 1920, and other repairs of an extraordinary character, increased expenses materially, the reconstruction of the dam alone requiring an expenditure of \$13,000. Necessary work for maintenance of navigation in the Illinois River required the expenditure of \$17,316.31.

Suits are pending in the Circuit Court of Cook County for the recovery of right-of-way of the Illinois and Michigan Canal, which is the property of the State. Much of this right-of-way has been seized by

squatters and corporations within the limits of Cook County, and there has been filling in the channel of the canal by the city of Chicago, corporations and individuals. The right-of-way of the canal within the limits of Cook County is very valuable. These suits are now ready for hearing and presenting evidence. During the year the division has had a vast amount of detail work in making examinations and copying records in the canal office from 1822 to the present time, and these investigations have also required examination of records in LaSalle, Grundy, Will and Cook Counties. A number of surveys have also been necessary, involving a great amount of work, both in the field and platting results. Much valuable evidence has been obtained which it is hoped will maintain the right of the State to this property. The investigations are not completed and will require some time. When the cases are actually set for hearing the Attorney General may require information that will necessitate still further investigation, but the division believes the information now at hand is more complete than ever before obtained to prove the ownership of the State of right-of-way all along the canal.

In August, 1920, fire destroyed State shops at Lockport erected many years ago in connection with the operation of the canal.

SURVEYS, ENCROACHMENTS AND POLLUTIONS.

During the past year the work of the Division of Waterways has greatly increased in connection with surveys and investigation of complaints of encroachments upon rivers and lakes of the State, and the pollution of such waters. To handle this work effectively it has been necessary to assign inspectors to patrol regularly various streams of the State and all portions of the Illinois water front of Lake Michigan. In addition to these inspectors, it has required the assignment of several engineers to make the necessary surveys, investigations and tests to determine the questions involved in the numerous complaints received. Some of these complaints are readily disposed of, while others require several weeks, or months, to cover all the details and make the analyses necessary in cases of pollution where the source is not readily determined otherwise.

During the past year complaints have been received from numerous farm organizations throughout the State where streams have been so polluted by industrial waste or city sewage as to prevent their natural and lawful use for agricultural or other legitimate purposes. In all such cases the department has promptly responded and given the best service possible to determine the cause and eliminate the evils. The engineering and scientific service thus rendered in these particular instances is of inestimable value, for the reason that few, if any, of the organizations or individuals complaining are in position to obtain this service otherwise because of the prohibitive cost.

Surveys.—An extensive survey was made at the request of the officials of the city of Moline during the last year for the purpose of ascertaining water levels and resulting damage, if any, from the proposed construction of a dam to flood the north channel of the Kankakee River in front of the city. The purpose of the construction was, first, to overcome undesirable conditions menacing the health of the community and to eliminate mosquito breeding grounds, and second, to improve the channel so that particular portion of the river might be used for navigation of boats and provide recreative and amusement features during the summer season. A map and report was prepared in this connection, covering the questions involved.

Land owners in the State of Indiana, having proceeded on an extensive plan of drainage, contemplating the discharge of water therefrom into the Kankakee River, the Division of Waterways was requested to make an investigation and survey to determine whether or not the increased flow which would result from this work would damage land owners along the Kankakee River within the State of Illinois, and if so, to what extent. The Fifty-second General Assembly took cognizance of this situation, appointing a committee of the Senate and House to investigate and report. The committee of the General Assembly requested the Division of Waterways to make the survey and investigate physical conditions. The engineering staff of the division was engaged for some time in this work, making a comprehensive investigation and survey from the Illinois-Indiana State line west to Moline. This survey indicated considerable damage would probably result from turning water from the drainage area of Indiana into the Kankakee River, unless there was material improvement of the channel of the Kankakee River between the State line and Moline. This improvement requires straightening the channel and the removal of rock ledges and other work. This means great expense for land owners in Illinois unless paid for by those in Indiana benefitting from the drainage district construction. The complete report of the division and of the committee of the Fifty-second General Assembly is to be found in the journals of the General Assembly and need not be presented in this report.

During the year, 157 permits were issued for improvements in or along streams and lakes of the State. Each of the applications for permit was accompanied by plans of the proposed work and required engineering investigation. It was found several of the plans submitted did not provide adequate construction for the purpose intended, and the engineers of this division supplied the necessary information or suggested the necessary changes to the parties seeking permits, so as to eliminate possible loss of life or damage to property.

All these permits impose conditions requiring changes or modifications at any time in the future that public interest of any character may require, and subject to the order of the Department of Public Works

and Buildings. All of the work authorized by the permits is subject to the supervision and direction of the Division of Waterways.

Encroachments.—During the year the most serious encroachments attempted have been found on the Fox River, the Rock River, Illinois River and on the north branch of the Chicago River. Encroachments along Lake Michigan and at various points on the Chicago River, in an attempt to fill some of the canals or “slips” connected therewith, have been stopped by inspectors of the State being on the ground and in touch with situations of this character.

Pollution of Streams.—A long standing complaint of pollution of Thorn Creek, as the result of the discharges of poorly treated sanitary sewage and industrial wastes, has been partially adjusted by the letting of contracts by the officials of Chicago Heights for the construction of an adequate sewage treatment plant for the treatment of sanitary sewage. The contract for this work has been let and it is anticipated it will be completed before the close of the year. It will then be possible to determine accurately the extent of pollution by discharge of untreated industrial wastes from plants which will not be connected with the city treatment plant, but which are connected with a sewer designed and constructed to handle only storm waters.

Another case of pollution that has been in controversy for some years is that of the Little Vermilion River at Pontiac. The city of Pontiac constructed a sewage treatment plant, the State being obligated to pay a certain amount of the cost to care for the sewage from the State Reformatory. The city apparently had no adequate engineering supervision of the construction of this sewage treatment plant, however, with the result it could not be operated, and therefore the State refused to pay the amount appropriated.

Because of the interest of the State in this situation, and the previous failure of the city to get a satisfactory plant, the Division of Waterways was called upon to provide plans and supervise the construction of an entire new sewage treatment plant. Plans have been prepared and construction work has started. The plant will be completed and ready for operation this fall, and it is believed there will be no basis for further complaint of pollution from sewage discharged into the stream by the city of Pontiac.

Extensive studies were made at Joliet during the year to ascertain changes which must be made in the sewerage system there, when the waterway, now under consideration, is constructed. This waterway will raise the river high above its present level and will require large intercepting sewers to carry the sewage to a point below a dam proposed a short distance below the city. Designs for these changes in the sewerage system have been made and are on file. Similar investigations were made to ascertain what changes, if any, will be required at Ottawa, Seneca and Morris, due to the proposed deep waterway.

Two points, where complaints of pollution have covered a period of years as the result of cannery wastes, are Rochelle and Hoopeston. Investigations at both points have covered a long period.

The canneries at Rochelle provided filter beds and other methods of disposal of wastes to obviate the pollution of the stream, and these are working quite satisfactorily at this time.

Complaints of conditions at Hoopeston have covered more than six years. The former Rivers and Lakes Commission heard evidence of the pollution at this point and entered an order requiring the city of Hoopeston and the canneries to stop discharging sewage and waste into the stream. An appeal was taken from this order to the Circuit Court of Sangamon county, and the court held that the order was unreasonable in that it did not give sufficient time for the work ordered. Following this decision, complaints were renewed and the Division of Waterways having succeeded to the powers previously vested in the Rivers and Lakes Commission, proceeded with its investigations. Early this spring, believing its investigations had proceeded far enough to indicate the canneries were responsible for the pollution because of the waste products discharged into the stream, this division had a conference with the officials of the canning companies involved. They were insistent in the view the city of Hoopeston was the responsible source of the pollution, but agreed if after investigation of conditions and analyses of the water during low water periods before, during and after the canning season, it was found the cannery waste was responsible for the pollution, scientific methods of treatment would be adopted. To determine the point at issue and obtain necessary evidence in case it becomes necessary for another hearing, or for action by the Attorney General, the division is now making the necessary investigations and tests.

As a result of the investigation of complaints by the division of pollution the city of Downers Grove has organized a sanitary district to obviate complaints there. Suits are pending against the municipalities of Roselle and Wheaton, and because of complaints against the city of Elgin, it is probable suit will be necessary against that municipality to obtain action which will afford relief at that point. The city of DeKalb has a good sewage treatment installation, but upon complaints of pollution it was found neglected and not properly operating. The division gave city officials necessary information of what was necessary in the way of repairs and this work is in progress. The city of Elmhurst is completing a sewage treatment plant, delayed because of the war, and this will adjust complaints of long standing. Other cities where pollution has been complained of are taking necessary steps to obviate same.

The division has been called upon several times in the last six months to act as arbitrator in connection with the construction of dams

at Decatur to provide necessary water supply and in connection with sewage disposal in that city. The various complaints were investigated. Division engineers made field surveys to determine whether the complaints were well founded. Division officers succeeded in harmonizing the various interests and most of the parties in disagreement admit that the problems involved have been adjusted with reasonable satisfaction, and the work incidental to the great public improvement being made by the city of Decatur is progressing satisfactorily.

Several complaints have been received by the department of flooding of Wolf Run, just west of the town of Bluffs, on the Wabash railroad. Wolf Run is a small stream rising in the hills east of Bluffs and running rapidly down till it reaches the Illinois River Bottoms, where its grade is much flattened. Just at this point it crosses under a pile bridge on the Hannibal division of the railroad, and after paralleling the Keokuk division for about a mile, passes under it through another pile bridge. The collection of debris at these bridges during high water, together with the flatter slope of the stream, cause periodical flooding over the adjacent lands and down through the Mauvaisterre drainage district.

With a view to changing the channel of Wolf Run so as to avoid this flooding in the future, the division has had several meetings with representatives of the railroad, the Mauvaisterre district and adjacent property owners. Surveys have been made and plans are now being prepared by which it is hoped that friendly cooperation may avoid all future litigation and entirely relieve the situation.

OIL WELL POLLUTION.

Illinois has been fortunate in having among its underground sources of wealth, a generous supply of oil.

Oil is being obtained in paying quantities in several sections of the State and test wells are being drilled in numerous other localities from which much success is hoped. However, along with the production of the oil are usually some difficulties, such as the pollution of streams, in which the division has been interested.

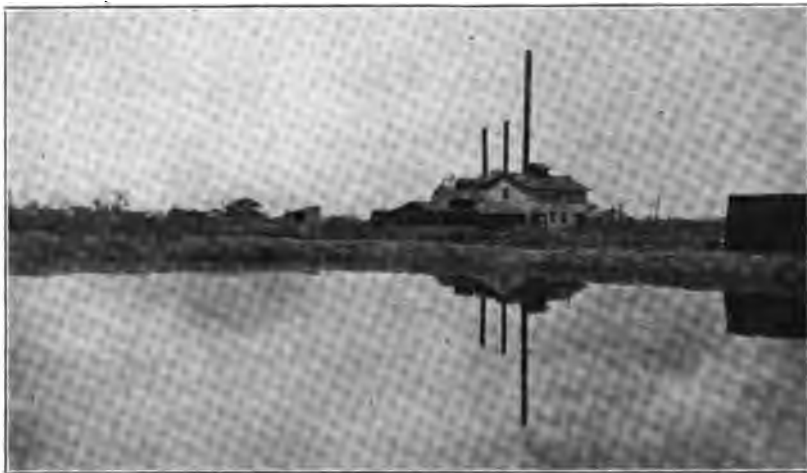
Stream pollution from oil wells is of two kinds: First, waste crude oil itself; and, second, salt water.

(1) The oil pollution is caused by overflow of tanks, leakage from tanks and pipe lines and careless operation. This pollution follows down the drainage streams in the shape of a heavy black oil, covers banks, bottom and vegetation with an oily residue often far out of the natural stream bed to the high water line, as shown on trees, brush and ground in almost any oil region stream. The result is unsightly streams, vegetation killed, water made unhealthy and often undrinkable for stock. Danger of fire is also a result of the oil wastes reaching the streams. For example, the Baltimore and Ohio Railroad bridge near

Lawrenceville has twice burned by reason of engine sparks falling into the stream and igniting the oil on the surface thereof. Again at the Waterloo field, within a very few months of the beginning of its life as an oil field, a fire occurred which destroyed the tanks of the Ohio Oil



Original pond of Indian Oil Co. at Sandoval outlet at bottom allowing oil to escape. Afterwards changed to trapped outlet, according to plan of Division of Waterways.



Trapped pond of Southwestern Oil Co. at Sandoval, built on plans and request of Division of Waterways.

Company and extended down along the small drainage streams for more than a quarter mile, endangering one farm house on the way.

(2) Salt water rises with the oil at all wells in these fields, varying much in quantity in different regions and sometimes in adjacent

wells. Nothing can be done at any reasonable cost to prevent this inflow of salt water. With the oil waste, however, the situation is different. There is no occasion for the waste of oil. It is a loss to the oil company and a damage to the property owners for miles down stream below the wells. For this reason oil pollution has been investigated in three different fields during the current year, which will be taken up separately.

Carlyle Field.—Carlyle field, about one square mile in area, is located in Clinton County, near the city of Carlyle. It is operated entirely by the Ohio Oil Company. One hundred twenty-two wells on 14 different farms or leaseholds are operated. Each leasehold has its own pumping system, separator, oil cistern and waste pond. The drainage of the entire field is to Beaver Creek, a tributary to the Kaskaskia. The waste oil is well cared for through the trapped ponds and no complaints have been received as to pollution of the stream.

Sandoval Field.—This field is also about one mile square, located just north of Sandoval, Marion County. There are four operating companies in the field. The Ohio Oil Company, Kewanee Oil Company, Indian Oil Company and the Southwestern Oil Company.

Complaints were received late in 1920 from farmers located on Lost Creek, several miles below the oil field, and from Farm Advisor Rehling of Clinton County, that waste oil and salt water were polluting Lost Creek to such an extent as to kill the fish and timber, ruin pasture land, etc.

Investigation was made and the complaints were found in a large measure to be true. Lost Creek was found to be badly polluted with floating oil and the high water line was very distinctly marked by the black oil residue on trees, bushes and ground outside the regular channel.

At the time of the first visit—in December, 1920—all four of the companies were allowing waste oil to reach the creek either without any attempt to stop it, or with inefficient methods of prevention. The Ohio company was in the best shape with settling ponds at each pumping plant, but according to information received, these ponds had no outlet, and periodically when the ponds became full, a trench was opened through the bank, allowing water and oil to escape to the stream.

The Indian Oil Company had a small pond but oil and water were passing directly through it by means of an open outlet at the bottom.

The Kewanee Oil Company had a very small pond thick with oil, which was occasionally skimmed off for road use, but much of it escaped to the stream.

The Southwestern Oil Company made no pretext of retaining their waste and the small tributary stream draining their property was extremely foul with oil.

Letters were written to each company, enclosing a sketch plan by which the oil could be trapped in the ponds and the water flow continually to the stream. All four companies have willingly complied with

the plans of the department and at present no new oil reaches the stream. Oil remaining on bed or banks of the branch or main stream will continue to go down in high water periods until finally cleared away, but no new oil is now polluting the stream.



Ohio Oil Company, Waterloo Field, looking up stream at pond trapped and built according to plans of Division of Waterways.



Ohio Oil Company, Waterloo Field, looking down stream at pond trapped and built according to plans of Division of Waterways.

The salt water is, however, unavoidable, except at a cost so high as to put the oil companies out of business. It is a necessary concomitant of the oil production. The amount of it, however, is materially de-

creased by the use of it for boilers, condensers and by evaporation in the ponds.

No complaints have been received by the department or by the farm advisor since the changes were made.

Waterloo Oil Field.—This is a new field, the first well being opened in February, 1921. The field is located north of Waterloo, Monroe County. In May, 1921, complaints were received from farmers and from Farm Advisor Tate of the extreme pollution of two small streams draining the oil field. A visit was then made to the field and the complaints were found to be true. On one branch the oil had caught fire and burned about a quarter of a mile down stream from the wells. On the other branch the entire surface of the small stream was covered with oil and pastures were damaged and water for cattle was rendered useless.

The production in this field was originally by two companies, the Ohio Oil Company and Ellis & Sutherland, but new companies are coming in and new wells are being drilled constantly.

On request of the department, the Ohio Oil Company has cared for its waste by means of a good sized trapped pond. Ellis & Sutherland Company has not entirely removed the cause of complaint as yet, but promises to do so.

The Pure Oil Company has also lately begun operating and is caring for the waste oil.

It is expected that all companies operating in this field will be in shape to control their waste oil before the present season is over.

NEW LEGISLATION.

The Fifty-second General Assembly enacted more constructive legislation for the purpose of preventing pollution of and encroachment upon the various lakes, rivers and water courses of the State than ever before. General police power has been vested in the State, acting by and through the Department of Public Works and Buildings and its Division of Waterways, to supervise work of this character. It is now necessary to submit plans and obtain a permit from the Division of Waterways before any work can legally be done toward the construction of a sewer outlet for the discharge of sewage into any lake, stream or water course of the State, nor can any structure of any kind or character or any encroachment be lawfully made upon any of the streams or lakes of the State until plans have been submitted and a permit obtained.

The last General Assembly included drainage districts and made such districts subject to supervision of the State acting by and through the Department of Public Works and Buildings, Division of Waterways, where there would be an added discharge of water to any stream or where the natural course of any stream is to be changed. Under the present statute too, all park districts and municipalities are subject to the supervision of the State, so far as any work of any character is con-

cerned within any of the waters of the State, whether these waters be navigable or not.

The wisdom of these provisions is manifest in view of the experience of the Division of Waterways. Numerous plans have been submitted for various forms of construction in the streams or lakes of the State and in many instances the proposed construction has been found entirely inadequate for the purposes intended. Had those interested proceeded under their original plans there was grave risk of loss of life and property by dams giving away or by increase of flood water conditions. In all these cases there has been such engineering supervision as resulted in plans being amended in such manner as to insure safety. The policy of the Division of Waterways has not been to prevent proper construction at any point, but to assist in providing stable plans. In many communities the requirement of supervision by the State has resulted in financial saving to the communities or individuals interested and has also prevented the possibility of loss and damage. The necessity of obtaining a permit has prevented unlawful encroachment upon the streams in a manner that would obstruct the proper disposal of flood waters. In two or three instances the law in this particular has been ignored and suits will probably be necessary to require the removal of the encroachment and to collect the penalties imposed by law for its violation.

The present law in this particular is considered as good as that of any state and far ahead of several states of the Union. One of the evils of the present day is the pollution of the rivers and water courses of the State by the discharge of untreated sewage therein. This subject was treated at length in our last annual report. The requirements of the present law will do much to remove cause of complaint in this particular, so far as future connections with streams or lakes for sewage disposal are concerned.

The fiftieth General Assembly provided what is generally termed the "Civil Administrative Code." Prior to that time the law vested certain powers in what was known as the "Rivers and Lakes Commission" of the State. Those powers and duties are now vested in the Department of Public Works and Buildings and administered by the Division of Waterways. Therefore, the preliminary sections of the "Rivers and Lakes Commission" law and appointment of members is omitted.

As a matter of information, the law applicable to pollutions, encroachments and erection of structures in the rivers, lakes and water courses of this State as amended by the fifty-first and fifty-second General Assemblies is given in this report. Wherever the words "Rivers and Lakes Commission" appear, the words "Department of Public Works and Buildings" should be substituted.

JURISDICTION—DUTIES—LIST OF WATERS.

5. Said Rivers and Lakes Commission shall, upon behalf of the State of Illinois, have jurisdiction and supervision over all of the rivers and lakes of the State of Illinois, wherein the State of Illinois or the people of the State of Illinois have any rights or interests, and it shall be the duty of said commission to make a list by counties of all the waters of Illinois, showing the waters, both navigable and non-navigable, that are found in each and every county of the State of Illinois, and if the same are lakes, the extent of the shore lines and the amount, extent and area of the water surface; and in a like way, if the same are rivers, and specifying whether the same are navigable or non-navigable, and whether the same, or any of the same have or have not been meandered.

TO SECURE ALL POSSIBLE DATA—REPORT.

6. It shall be the duty of the said Rivers and Lakes Commission to obtain all possible data with reference to all of the waters of the State of Illinois, including original surveys, meander notes, maps, plats, river gauges, high and low water marks, and all and every source of information which will tend to disclose or establish the rights of the people of the State of Illinois with reference to each body of water in the State of Illinois, and shall, from time to time, make public report of their findings.

TO HAVE GENERAL SUPERVISION—ENCROACHMENTS.

7. It shall be the duty of said commission to have a general supervision of every body of water within the State of Illinois, wherein the State or the people of the State have any rights or interests, whether the same be lakes or rivers, and at all times to exercise a vigilant care to see that none of said bodies of water are encroached upon, or wrongfully seized or used by any private interest in any way, except as may be provided by law and then only after permission shall be given by said commission, and from time to time for that purpose, to make accurate surveys of the shores of said lakes and rivers, and to jealously guard the same in order that the true and natural conditions thereof may not be wrongfully and improperly changed to the detriment and injury of the State of Illinois.

The Rivers and Lakes Commission of Illinois shall have power and authority to inquire into encroachments upon, wrongful invasion and private use of every stream, river, lake or other body of water in which the State of Illinois has any right or interests. The commission shall have power to make and enforce such orders as will secure every stream, river, lake or other body of water, in which the State of Illinois has any right or interest against encroachment, wrongful seizure or private use. (As amended by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

COMPLAINTS—HEARINGS.

8. It shall be the duty of the Rivers and Lakes Commission of Illinois to receive from any citizen complaints as to any invasion of or encroachment upon any rights of the State of Illinois, or of any citizen of the State of Illinois, with reference to any of the public bodies of water of the State of Illinois, or as to any interference with the right or claim of any citizen to use or enjoy any public water of this State, and upon being requested so to do, the said Rivers and Lakes Commission shall hold a public hearing for the purpose of taking evidence with reference to the subject matter of said complaint, and of hearing all persons who may appear upon behalf of, or in opposition to said petition, and at the conclusion of such hearing they shall enter an order defining the rights and interests of the parties, and prescribing their duties. (As amended by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

COMPLAINTS AS TO NAVIGATION.

9. It shall be the duty of the Rivers and Lakes Commission to carefully investigate any and all complaints that may be made that any person, company or corporation is attempting to interfere with the free and unobstructed

navigation of any of the public bodies of water of the State of Illinois, and if they find that such complaint is well founded, they shall enter such order as may be required to prevent such wrongful interference with such navigation. (As amended by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

COMPLAINTS AS TO DOCKS, LANDINGS, ETC.

10. It shall also be the duty of said Rivers and Lakes Commission to investigate any and all complaints within the State of Illinois that any person, company, association or corporation is attempting to assert any lawful rights or exclusive privileges or franchises with reference to docks, landings, wharves, or the free and unobstructed access to, or egress from any navigable body of water in the State of Illinois, and if they find upon investigation that any such complaint is well founded, they shall enter such order as may be necessary to correct the wrongful act or evil complained of. (As amended by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

NAVIGABILITY DATA—EVIDENCE.

11. It shall be the duty of the Rivers and Lakes Commission of Illinois to obtain all possible data, surveys, charts, high and low water marks, and river gauges, and information with reference to the navigability of any of the public bodies of water of the State of Illinois, and to keep the same at all times available for public inspection, and to aid in extending the navigation of any of the public bodies of water of the State of Illinois. Any such information shall be furnished at its actual cost at any time to any person so desiring the same. Certified copies of such data shall be received in court as evidence of the facts thereby shown.

DEEP WATERWAYS DATA.

12. It shall be the duty of said Rivers and Lakes Commission to procure and collect all obtainable data with reference to deep waterways within the State of Illinois, and from time to time disseminate information with reference thereto, and to take such action as will permit and encourage every available use of the public bodies of water of the State of Illinois, for navigation and carrying trade, both of commerce and passenger.

INVESTIGATION OF ENCROACHMENTS—ACTIONS.

13. It shall be the duty of said commission to make a careful investigation of each and every body of water, both river and lake, in the State of Illinois, and to ascertain to what extent, if at all, the same have been encroached upon by private interests or individuals and wherever they believe that the same have been so encroached upon, to commence appropriate action either to recover full compensation for such wrongful encroachment, or to recover the use of the same, or of any lands improperly or unlawfully made in connection with any public river or lake for the use of the people of the State of Illinois. The right and authority hereby given and created shall not be held to be exclusive, or to take from the Attorney General or any other law officer of the State of Illinois, the right to commence suit or action.

14. It shall be the duty of the Department of Public Works and Buildings, to see that all the streams and lakes of the State of Illinois, wherein the State of Illinois or any of its citizens has any rights or interests, are not polluted or defiled. It shall be unlawful for any person, persons, firm or corporation, to throw, discharge, dump, or deposit, or cause, suffer, or procure to be thrown, discharged, dumped or deposited any acids or chemicals, industrial wastes or refuse, poisonous effluent or dye-stuff, clay or other washings, or any other substance deleterious to fish life, or any refuse matter of any kind or description containing solids, substance, discoloring or otherwise polluting any navigable lake, river or stream in this State, or lake, river or stream connected with or the waters of which discharge into any navigable lake, river or stream of this State or upon the borders thereof, or any water course whatsoever. Any person, persons, firm or corporation violating the provisions of this section shall, upon conviction thereof, be

ined in a sum not exceeding five hundred dollars (\$500.00) for each offense. Complaints of violations of the provisions of this section shall be made to the Department of Public Works and Buildings of the State of Illinois. This department is authorized to make investigations, and hold hearings if necessary, to determine whether or not the complaint is well founded. If the department shall find the complaint is well founded it may, after giving due and reasonable notice to the persons to be affected thereby and after giving such persons an opportunity to be heard, make, with the assistance of engineering suggestions, an order prescribing methods for neutralizing said acids and other poisonous substances and to prevent continued pollution of said streams and shall have the power to prohibit discharges, as herein defined, into said lakes or streams until the terms of said order have been complied with; provided, however, that the provisions of this section shall not apply to that portion of the DesPlaines River lying down stream from any point at which the waters of the Sanitary District of Chicago have been or are discharged into said DesPlaines River, nor to the waters of Hickory Creek, tributary to said DesPlaines River.

OFFICE A REPOSITORY FOR DATA.

15. It shall be the duty of said Rivers and Lakes Commission to obtain and preserve in its office all obtainable data with reference to the rivers and lakes of Illinois, and to make such office a repository thereof, and all of such records and data shall be public and be available for the use of any person who may be interested therein; and certified copies thereof shall be received in court as evidence of the facts therein set forth. To secure the information authorized by this section to be obtained the commission or its duly authorized agent may cross any lands within the State and enter any building or factory where the power used is of hydraulic generation. (As amended by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

BEAUTIFYING AND PROTECTING PUBLIC BODIES OF WATER.

16. It shall be the duty of the Rivers and Lakes Commission to plan and devise methods, ways and means for the preservation and beautifying of the public bodies of water of the State of Illinois, and for making the same more available for the use of the public, and they shall, from time to time, report their findings and conclusions to the Governor and the General Assembly of the State of Illinois, and shall, from time to time, submit to the General Assembly of the State of Illinois drafts of such measures as they may deem necessary to be adopted by the legislature of this State for the accomplishment of such purpose, or for the protection of such bodies of water.

RECLAMATION AND DRAINAGE DATA.

17. It shall be the duty of said Rivers and Lakes Commission to furnish at its actual cost to any person or persons who may be desirous of reclaiming, draining or cultivating any wash or overflow lands in connection with any of the public waters of the State of Illinois, any and all data which they may have in their possession, showing surveys, elevations, contours, cost of construction of levees, plans therefor, and information with reference thereto, and shall so fully as may be, advise with, aid and assist in any and all enterprises looking towards the reclamation or drainage of lands, wherever in their judgment, the same may be attempted without detriment to the interests of the State of Illinois, or the public, in any of said bodies of water.

18. It shall be unlawful to make any fill or deposit of rock, earth, sand or other material, or any refuse matter of any kind or description, or build or commence the building of any wharf, pier, dolphin, boom, wier, break-water, bulk-head, jetty, or other structure, or to do any work of any kind whatsoever in any of the public bodies of water within the State of Illinois, without first submitting the plans, profiles, and specifications therefor, and such other data and information as may be required, to the Department of Public Works and Buildings of the State and receiving a permit therefor,

signed by the director of said department and authenticated by the seal thereof; and any person, corporation, company, city, or municipality, or other agency, which shall do any of the things above prohibited, without securing a permit therefor as above provided, shall, upon conviction thereof, be fined in a sum not exceeding five thousand dollars or imprisoned in the county jail not exceeding one year, or may, in the discretion of the court, be punished by both fine and imprisonment. Any structure, fill, or deposit erected or made in any of the public bodies of water of this State, in violation of the provisions of this section, is hereby declared to be a purpresture and may be abated as such at the expense of the person, corporation, company, city, municipality, or other agency responsible therefor, or if, in the discretion of said Department of Public Works and Buildings, it be decided that said structure, fill, or deposit may remain, said department may fix such rule, regulation, requirement, restrictions, or rentals, or require and compel such changes, modifications and repairs as shall be necessary to protect the interests of the State. If deemed in the public interest, said Department of Public Works and Buildings may, for the purpose of establishing uniform shore lines upon Lake Michigan or other streams or lakes of this State, permit fills of rock, earth, or sand to be placed inside a wall or breakwater so constructed as not to permit the escape of such materials into such lake, river, or stream, and said department is hereby authorized to require of applicants for such permits such contracts or to impose such restrictions as shall fully protect the interests of the State. Wherever the terms public waters, public bodies of water or streams and lakes are used or referred to in this act, they shall be construed to mean all open public streams (except as to any sanitary district channel now constructed or being constructed) and lakes capable of being navigated by water craft, in whole or in part, for commercial uses and purposes, and all lakes, rivers, and streams which in their natural condition are capable of being improved and made navigable, or that are connected with or discharge their waters into navigable lakes or rivers within, or upon the borders of the State of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water and directly accessible thereto.

PUBLIC RESERVATIONS.

19. It shall be the duty of said Rivers and Lakes Commission to, from time to time, prepare and devise schemes, plans, ways and means for the reservation by the State of desirable tracts of land in connection with the public waters of the State of Illinois, to the end that public reservations or preserves may be made along said public bodies of water for the use of all of the people of the State of Illinois, for pleasure, recreation and sport, and to recommend to the legislature, from time to time, such measures as in their judgment will make effective the plan for the creation of such public reservations, and as such reservations of (or) preserves may be made from time to time, the same shall be under the jurisdiction of the Rivers and Lakes Commission.

WATER POWER DATA.

20. It shall be the duty of said commission to obtain data and information as to the availability of the various streams of Illinois for water power, and to preserve all data obtainable in connection therewith, and to report to the Governor and the General Assembly of the State such facts as to the amount of water power which can be so developed, from time to time, as in their judgment should be communicated, looking to the preservation of the rights of the State of Illinois in the water power and navigation of this State.

NATURAL RESOURCES—PUBLICATIONS.

21. It shall be the duty of said commission to make particular research into the natural resources of the State of Illinois in connection with any of the public bodies of water of the State of Illinois, and to obtain, classify and preserve all data which may be procurable in connection therewith and, from

time to time, disseminate for the information of the people of the State of Illinois, by way of bulletins or publications, such information as they may be able to thus obtain.

NAVIGABILITY DATA—PROPAGATION OF FISH.

22. It shall be the duty of said Rivers and Lakes Commission to obtain, from time to time, all possible data with reference to the navigability of the public waters of the State of Illinois, and with reference to the cultivation and propagation of fish, and to that end they shall cooperate with the fish commission of the State of Illinois, to devise ways and plans and means for the purpose of making the public bodies of water of the State of Illinois more effective for the production of a cheap food supply in the way of various fish which may be cultivated or propagated in these bodies of water.

23. It shall be the duty of the Department of Public Works and Buildings to maintain stream gauge stations, and to make careful investigations of the streams of the State with reference to the carrying capacity of all such streams in times of flood and under normal conditions; to prevent the carrying capacity of streams to be limited and impaired by fills, deposits, obstructions, encroachments therein or bridges over same, to an extent where the same cannot safely dispose of the flood waters which may naturally, lawfully and properly be discharged therein; to require such changes in bridges across any navigable waters or streams, or bodies of water made navigable, necessary to meet the demands of navigation and commerce thereon. If the capacity of any stream is limited and impaired by reason of any of the acts or construction in this act provided, so as to constitute a menace to property along the course of said stream or safety of the people of the State, or results in damage, overflow, or an interruption to navigation, said Department of Public Works and Buildings, shall take such action as may be required, by injunction or otherwise, to prevent such encroachments or the erection of such structures, or compel the removal or modification of same. It shall be unlawful for any person, persons, corporations, counties, cities, municipalities, or other agency to make any fill, deposit or encroachment in, or erect any bridges, over any of the streams of this State, until plans, profiles and specifications, and other data which may be required, have been first filed with the said Department of Public Works and Buildings of this State, and a written permit received therefor.

The Department of Public Works and Buildings is authorized, in case of existing dams, to require said dams be maintained in a proper state of repair, and at a height for proper control of water levels in the disposal of flood waters and at normal stages, and for such purposes to require changes and modifications therein, and to compel the installation of fishways in existing dams wherever deemed necessary.

24. It shall be the duty of said Department of Public Works and Buildings, to carefully examine the shore lines of Lake Michigan and the Chicago River each year for the purpose of seeing that encroachments are not made upon these bodies of water, and for the purpose of preventing any land being made along the said Chicago River or Lake Michigan in such manner as might become an encroachment thereon.

The Department of Public Works and Buildings, for the purpose of preventing fills, deposits of any character, or encroachments upon any of the lakes or rivers of this State, and for the protection of navigation upon any of the navigable rivers and lakes of this State, or such rivers and lakes as are capable of being made navigable by improvement, is hereby authorized and empowered to lay out and fix shore or harbor lines through any city or municipality, or at any other locality where public interests may require, and to authorize the construction of retaining walls under proper restrictions and conditions. Any person or persons, city or municipality, or other agency, desiring to erect such wall, shall first secure a permit therefor upon application to and submission of plans, profiles and specifications to said Department of Public Works and Buildings, the line upon which said construction is to be placed to be fixed by survey by said department. Whoever violates any of the provisions of this section, or does any work herein desig-

nated without first obtaining a permit from the Department of Public Works and Buildings shall, upon conviction, be fined not exceeding \$2,500.00 or imprisoned in the county jail not exceeding one year, or may, in the discretion of the court, be punished by both such fine and imprisonment.

ENFORCEMENT OF ACT.

25. The Attorney General of the State of Illinois, or any State's attorney of any county of the State of Illinois, or any attorney who may be authorized so to do by the said Rivers and Lakes Commission, shall have the power to represent the said Rivers and Lakes Commission, and in the name and by the authority of the State of Illinois, to invoke for the purpose specified in this act, all of the power of the State of Illinois to prevent the wrongs and injuries herein referred to, and for that purpose such Attorney General, State's attorney or authorized attorney shall be deemed to be the proper representative of the State of Illinois, with full power and authority upon its behalf to prosecute all necessary suits or actions.

26. Said Department of Public Works and Buildings shall, for the purpose of protecting the rights and interests of the State of Illinois, or the citizens of the State of Illinois, have full and complete jurisdiction of every public body of water in the State of Illinois, subject only to the paramount authority of the Government of the United States with reference to the navigation of such stream or streams, and the laws of Illinois, but nothing in this act contained shall be construed or held to be any impairment whatsoever of the rights of the citizens of the State of Illinois to fully and in a proper manner, enjoy the use of any and all of the public waters of the State of Illinois, and the jurisdiction of said Department of Public Works and Buildings shall be deemed to be for the purpose of protecting the rights of the people of the State in the full and free enjoyment of all of such bodies of water, and for the purpose of preventing unlawful and improper encroachment upon the same, or impairment of the rights of the people with reference thereto, and every proper use which the people may make of the public rivers and streams and lakes of the State of Illinois shall be aided, assisted, encouraged and protected by the Department of Public Works and Buildings.

ORDERS MADE ONLY AFTER NOTICE AND HEARING—PENALTY FOR VIOLATION OF ORDER—APPEAL—WHEN APPEAL NOT TAKEN—OFFICERS TO ENFORCE ORDERS.

26a. All orders entered by said commission shall be made only upon giving due and reasonable notice to persons to be affected thereby; or having any interest in the subject matter of such inquiry and after a hearing in relation thereto. Any person who shall neglect or refuse or fail to obey any lawful order made by the Rivers and Lakes Commission and to carry the same into effect in accordance with the terms of such order shall be liable to a fine of not less than one hundred dollars (\$100.00) nor more than one thousand dollars (\$1,000.00) to be recovered in an action of debt in the name of the People of the State of Illinois in any court of competent jurisdiction.

Any party to any proceeding before this commission, or any party affected by an order thereof, may appeal to the Circuit Court of Sangamon county at any time within twenty days after service of a copy of such order on the parties of record in such proceedings. The party taking such appeal shall file with the commission written notice of such appeal. The commission, upon the filing of such notice of appeal, shall, within five days after the filing of said notice, file with the clerk of said Circuit Court of Sangamon county, Illinois, a certified copy of the pleadings and order appealed from. The party serving such notice of appeal shall, within five days after the service of said notice upon said commission, file a copy of said notice with proof of service with the clerk of said court to which such appeal is taken and thereupon said Circuit Court shall have jurisdiction over said appeal and the same shall be entered upon the records of said court and shall be tried therein according to the rules relating to the trial of chancery suits so far as the same are applicable. The Rivers and Lakes Commission of Illinois shall be designated as complainant, and the person or persons affected

by the order of said commission shall be designated as defendant, no further pleadings than those already filed before the commission shall be necessary. Such order made by said commission shall be prima facie evidence of the matters therein stated, and the order shall be prima facie reasonable, and the burden of proof raised by the appeal shall be on the appellant. If said court shall determine that the order appealed from is lawful and reasonable, it shall be affirmed and the order enforced as provided by law, otherwise, it shall be vacated and set aside. If an appeal is not taken, such order shall become final and it shall thereupon be the duty of the person or persons affected thereby to comply therewith. All orders from which no appeal is taken shall be deemed to be in full force and effect for all purposes from the time when the right to appeal from such order expires. When no appeal is taken from an order, as herein provided, parties affected by such order shall be deemed to have waived the right to have the merits of said controversy reviewed by a court and there shall be no trial of the merits of or re-examination of the facts of any controversy in which such order was made by any court to which application may be made for a writ to enforce the same. Appeals from all final orders and judgments entered in review by the said Circuit Court of the action of the commission, shall go directly to the Supreme Court. It shall be the duty of the sheriffs, constables, marshals and police officers to enforce all lawful orders of the Rivers and Lakes Commission. (Added by amendment by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

INVESTIGATIONS AND HEARINGS—POWER TO ISSUE SUBPOENAS, ETC.—PENALTY—
ATTACHMENT FOR CONTEMPT.

26b. The Rivers and Lakes Commission may make such investigations and conduct such hearings as may be necessary to the performance of their duties under this act. In making any investigation or conducting any hearing as contemplated by this act, said commission shall have the power to issue subpoenas for the attendance of witnesses, and may administer oaths. Any person who shall be served with a subpoena to appear and testify, or to produce books and papers, and who shall refuse or neglect to appear or to testify or produce books and papers relevant to such investigation as commanded in such subpoena, shall, on conviction, be punished by a fine of not less than five (\$5.00) dollars nor more than one hundred (\$100.00) dollars, or by imprisonment in the county jail not more than six months, or by both such fine and imprisonment, in the discretion of the court. Any Circuit Court of this State, or any judge thereof, in vacation, upon application of said commission, may compel the attendance of witnesses, the production of books and papers and the giving of testimony before said commission by attachment for contempt as in other cases for refusal to obey the process and order of said court. (Added by amendment by act approved June 30, 1913. In force July 1, 1913. L. 1913, p. 121.)

ACT HOW CONSTRUED.

27. At all times this act shall be construed in a liberal manner for the purpose of preserving to the State of Illinois and the people of the State, fully and unimpaired, the rights which the State of Illinois and the people of the State of Illinois may have in any of the public waters of the State of Illinois, and to give them in connection therewith, the fullest possible enjoyment thereof, and to prevent to the fullest extent, the slightest improper encroachment or invasion upon the rights of the State of Illinois, or any of its citizens with reference thereto.

REPEAL.

28. Any and all acts or parts of acts in conflict herewith are hereby repealed.

29. No provision of this act shall be construed as limiting or impairing the powers and rights heretofore granted to any board of park commissioners, now existing, where such board of park commissioners have control of a park or parks within the limits of cities having a population of 200,000 or

over, and where such park commissioners are appointed by the Governor of the State of Illinois, or by the judges of the Circuit Court of the county in which such park district is located. Provided, however, that before any new work is done by such board of park commissioners affecting submerged lands in navigable waters of the State of Illinois the plans for all such work shall be submitted to the Department of Public Works and Buildings for approval before said work is undertaken.

29a. Before any drainage district now or hereafter organized in this State shall undertake any work which will increase the flow of water to be discharged into any of the streams of this State or which will involve any change in the natural course of any stream, work therein or improvement thereof, such district or districts shall submit the proposed plans for such work to the Department of Public Works and Buildings for approval. When such plans are submitted it shall be the duty of said department to investigate conditions and have engineering check and review of said plans, and may require such changes and modifications as may be found necessary to protect public interests in said streams. If said department finds public interests are protected and said plans will not result in avoidable damage from flood conditions, it shall approve said plans and issue permit for the work.

DIVISION OF PURCHASES AND SUPPLIES.

H. H. KOHN, *Superintendent.*

This report, uniform with all other departmental and divisional reports, deals with conditions between July 1, 1920, and June 30, 1921.

Too much cannot be said regarding the handling of requisitions. Detailed specifications should be listed thereon in order that this division may obtain real competition. The most serious problem confronting this division is the practice of divisions specifying advertised products—specific brands—thus eliminating competition.

We again earnestly recommend that divisions requisition standard and not broken packages. Unless this is done, particularly covering workshop, machinists, steamfitters, engineers' supplies, etc., we receive very few bids, as the overhead cost for handling small orders is greater than handling large ones, and, in most cases, we receive no bids at all, resulting in double work, viz: Re-advertising, preparing proposals, tabulating, awarding, etc. It is suggested in this connection that if standard packages cannot be used by certain institutions the quantities they require be transferred from the nearest institution using standard quantities, thus enabling the State to profit by the method of purchasing standard packages. The greater the volume of an article the lower the price.

Many requisitions are received by this division covering articles already purchased, before requisitions are approved, the articles having been left off quarterly requisitions, and cooperation is solicited to reduce this practice to the minimum, as it is an expensive procedure.

Since requisitions for the Division of Highways and Adjutant General's Department are now acted upon by this division, in addition to those for all of the other divisions included in the Civil Administrative Code, with the same office force, the increase in the work has been enormous. There also has been a tremendous increase in supplemental requisitions, which we hope will be reduced materially.

ESTIMATED COST.

We wish to commend the various divisions on the improvement in showing estimated costs. It is evident they are complying with the recommendation that they obtain this information from invoices or purchase orders.

ADVANCE INFORMATION TO DEALERS.

The practice of divisions giving advance information or samples to representatives of manufacturers, jobbers, etc., regarding supplies requi-

sitioned or about to be requisitioned should be prohibited, as it is unfair to this division.

IRRESPONSIBLE BIDDERS.

We are constantly receiving bids from irresponsible parties. That this is a serious question, goes without saying. Should we accept bids from individuals who have no established business or a commercial rating—merely a desk in some office building under the guise of a firm name—and who are seeking State business in competition with highly respectable and responsible firms? Should not such persons be prohibited from bidding?

STAPLES TO BE MANUFACTURED IN STATE INSTITUTIONS.

Only the man actively interested in the upkeep of the various penal and charitable institutions of the State of Illinois can thoroughly realize what the cost is to the taxpayer, and, what is of more importance, the productive value of the inmates of the various institutions. There has been a great deal of discussion in the past as to the advisability of manufacturing in State institutions as in State penitentiaries and reformatories. It would seem, based upon the experience of this division during the war and immediately thereafter, particularly, that systematic manufacture of certain items in our State penal institutions would not only relieve the taxpayers but would provide a sure source of supply for other institutions in the State. Under extensive manufacturing plans substantial profit would also surely accrue. This division is not particularly interested in the problem of institution manufacture other than from the standpoint of being able to secure a uniform supply of goods at a reasonable price and with such regularity that none of those supplied will be penalized in any manner. When it is considered that the institutions of the State will absorb all of the manufactured product made by institution labor, it is seen that this subject is taken entirely out of the field of competition in manufacturing and labor circles. In view of the large quantities of unbleached sheetings, blue denims, and other staple cotton goods, used by the State, namely, during the past year, 259,800 yards of unbleached sheetings, 74,100 yards of denims and 7,957 dozen suits of underwear, we believe that the State should manufacture some of these staple lines at the St. Charles School for Boys, and the Illinois State Reformatory, thereby serving a twofold purpose—making a saving in the price of the goods and teaching the boys an occupation which will benefit their future.

MARKET CONDITIONS.

We hope the violent business disturbance which began in May, 1920, has passed away and that the thousands of concerns, whose cases seemed hopeless some months ago, are on the road to safety. Money is easier, but bank credit is not available for operations designed to hold prices at fictitious levels.

In January, 1921, downward revisions of prices were made in many important brands of bleached and colored cotton goods. Chicago wholesale prices were revised to lower levels following the naming of new prices for spring by the mills. The revisions range from 10 per cent to as high as 33½ per cent from former quotations.

The accompanying table gives a comparison of prices paid for necessities. Your especial attention is called to statement "A" covering butterine, flour, groceries and meats:

PRICES PAID FOR GROCERIES, MEATS, BUTTERINE AND DRY GOODS IN 1920 AND 1921
COMPARED WITH PRICES PAID FOR THE SAME SUPPLIES IN 1915.

Article.	Measure.	1915, July, August, September.	1920, July, August, September.	1920, October, November, December.	1921, January, February, March.	1921, April, May, June.
GROCERIES.						
Dried fruits—						
Apples.....	Pound	.0672	.11	.10	.0620	.0642
Apricots.....	Pound	.0625	.251	.164	.154	.1357
Currants.....	Pound	.0735	.1662	.1610	.1415	.1275
Figs, white.....	Pound	.0459	.101	.0953	.091	.09
Peaches.....	Pound	.0368	.1860	.165	.121	.1075
Prunes.....	Pound	.0874	.144	.1175	.0970	.084
Raisins, loose, muscatel.....	Pound	.0629	Bids rej.	.26	.20	.171
Raisins, Cal. seedless.....	Pound	.0648	.2525	.231	.22	.181
Raisins, seeded muscatel.....	Pound	.065	.2125	.2325	.21	.21
Canned goods—						
Apples, No. 10 tins.....	Dosen	2.30	5.50	4.96	4.50	4.65
Cherries, red, No. 1 tins.....	Dosen	6.33	15.85	12.42	11.45	11.10
Corn, No. 2 tins.....	Dosen	.6275	1.39	1.23	.89	.89
Pears, No. 10 tins.....	Dosen	3.47	9.50	5.85	7.24	6.75
Peas, No. 2 tins.....	Dosen	.665	1.394	1.02	.92	1.00
Pineapple, sliced, No. 2½.....	Dosen	1.575	4.99	3.81	3.13	3.00
Tomatoes, No. 10 tins.....	Dosen	2.18	5.50	4.42	4.45	4.65
Beans, cereals, etc.—						
Beans, lima.....	Pound	.0533	.0762	.0673	.057	.0546
Beans, navy.....	Pound bu.	2.94	.0715	.0518	.047	.0424
Beans, red.....	Pound bu.	3.80	.0698	.0670	.052	.0521
Farina.....	Case	1.25	2.82	2.49	2.09	2.10
Rolled oats, 90 lb. bags.....	Pound	.0279	.06	.04035	.0334	.0283
Cornmeal, white.....	Pound	.0189	.0425	.021	.021	.017
Cornmeal, yellow.....	Pound	.0189	.0405	.0291	.0207	.017
Hominy, grits.....	Pound	.02	.047	.0289	.0213	.0176
Macaroni, broken.....	Pound	.03375	.0725	.07	.0605	.05
Noodles.....	Pound	.0438	.0845	.0825	.0790	.0695
Peas, split.....	Pound	.0557	.0675	.0630	.0561	.0524
Potatoes—						
Potatoes, in carlots.....	Bushel	.56	3.83	1.09	.87	.67
Miscellaneous—						
Apple butter, 30 lb. pails.....	Pound	.0375	1.267	.09	.09	.0706
Cheese, American.....	Pound	.155	.25	.2575	.22	.21
Crackers, soda.....	Pound	.0649	.134	.124	.11	.10
Crackers, oyster.....	Pound	.056	.134	.13	.11	.10
Crackers, graham.....	Pound	.0675	.164	.16	.12	.115
Gingersnaps.....	Pound	.05	.16	.13	.11	.0948
Minced meat (in barrels).....	Pound	.035	.12	.07	.08	.1085
Sugar, tea and coffee—						
Sugar, cane (in carlots).....	Pound	.0609	.2324	.1123	{ beet .0834 }	.09
Sugar, beet.....	Pound	.0612	.23	.1123	{ cane .0658 }	.0784
Sugar, C No. 6.....	Pound	.0540	.21	.1121	.08	.0645
Sugar, powdered.....	Pound	.0646	.2569	.1302	.0903	.0981
Coffee, roasted.....	Pound	.1375	.271	.178	.151	.1398
Tea, Japan.....	Pound	.245	.2350	.20	.1859	.1975

COMPARATIVE PRICES—Concluded.

Article.	Measure.	1915, July, August, September.	1920, July, August, September.	1920, October, November, December.	1921, January, February, March.	1921, April, May, June.
Flour—						
Flour, hard wheat.....	Barrel	4.77	11.0074	9.32	7.44	6.29
Flour, soft wheat.....	Barrel	4.60	11.3074	10.15	8.90	6.68
Butterine—						
Butterine, 2 lb. prints.....	Pound	.117	.2290	.2177	.1675	.1345
Butterine, 60 lb. tubs.....	Pound	.1125	.22	.2127	.1625	.1295
Meats, fresh—						
Fore, beef.....	Pound	.0891	.0965	.10	.0970	.094
Hinds, beef.....	Pound	.1171	.1965	.16	.1470	.184
Hearts, beef.....	Pound	.06875	.0825	.095	.087	.03
Pork loins.....	Pound	.14625	.2920	.25	.15	.23
Pork shoulders.....	Pound	.11875	.2320	.21	.1350	.165
Liver.....	Pound	.0775	.1135	.12	.1040	.0950
Chucks.....	Pound	.06125	.1062	.10	.0927	.1060
Mutton.....	Pound	.10375	.1485	.1635	.15	.14
Tongue, beef.....	Pound	.16	.4250	.36	.3250	.3150
Meats, cured—						
Bacon.....	Pound	.1498	.3115	.30	.2080	.1910
Corned beef.....	Pound	.0942	.1120		.1120	.0930
Ham.....	Pound	.14625	.35	.319	.1890	.2323
Ham, California.....	Pound	.105	.1780	.164		
Ham, skinned.....	Pound	.1362	.3780	.32	.1790	
Head cheese.....	Pound	.0698	.0965	.0970	.0840	.0635
Lard compound.....	Pound	.0748	.1980	.1670	.1170	.0920
Bologna.....	Pound	.0715	.1030	.1055	.0920	.0910
Frankfurters.....	Pound	.09175	.1175	.1180	.0980	.0940
Liver sausage.....	Pound	.0648	.0880	.0875	.0780	.0775
Pork sausage.....	Pound	.08	.1375	.1423	.0980	.0965
D. S. sides.....	Pound	.1042	.1830	.1792	.1230	.1170
Dry goods—						
Muslin, bandage 36".....	Yard	.0348	.165	.114	.135	Bids rej.
Sheeting, cotton, bleached 42".....	Yard	.0874	.44	.30	.219	Bids rej.
7-4.....	Yard	.164	.55	.479	.324	Bids rej.
8-4.....	Yard	.174	.62	.528	.362	Bids rej.
9-4.....	Yard	.1925	.70	.57	.397	Bids rej.
10-4.....	Yard	.2225	.85	.625	.4625	Bids rej.
Sheeting, cotton, unbleached—						
6-4.....	Yard	.1248	.48	Bids rej.	.249	
7-4.....	Yard	.1425	.55	Bids rej.	.287	.2550
8-4.....	Yard	.162	.62	Bids rej.	.334	.3225
9-4.....	Yard	.21375	.70	Bids rej.	.364	.35
Pillow tubing.....	Yard	.14	.544	.392	.264	Bids rej.
Gingham 26".....	Yard	.0748	.294	.225	.114	Bids rej.
Percale, 36" white ground.....	Yard	.064	.31	.194	.1725	Bids rej.
Shirting—						
Hickory.....	Yard	.084	.396	.22	.16	.14
Denim.....	Yard	.12	.413	.259	.194	
Table cloth, merc. 58".....	Yard	.3797	1.35	1.45	1.09	Bids rej.
Table cloth, merc. 66".....	Yard	.415	2.00			Bids rej.
Table cloth, merc. 72".....	Yard	.4479	1.92	**2.625	1.48	Bids rej.
Table cloth, white linen 72".....	Yard	1.00	3.50	2.35	2.00	Bids rej.
Napkins, linen damask.....	Dosen	2.75	5.00	3.50	3.00	Bids rej.
Toweling, unbleached 15".....	Yard	.099	.20	***.27	***.2187	Bids rej.
Crash, bleached 17".....	Yard	.0134	.255	***.28		Bids rej.
Towels, turkish.....	Dosen	1.34	7.25	4.50	3.72	Bids rej.
Towels, huck.....	Dosen	1.49	3.05	2.38	2.15	Bids rej.
Wash rags.....	Dosen	.305	.075	1.00	.834	Bids rej.

** Best quality purchased. Lower bids received.

*** Stevens "A" crash purchased.

PRICES PAID FOR GROCERIES, FLOUR, MEATS, BUTTERINE AND DRY GOODS IN 1917, 1918, 1919, 1920 AND 1921 COMPARED WITH PRICES PAID FOR THE SAME SUPPLIES IN 1915.

(Continued on pages 356 and 357.)

Article.	Meas- ure.	1919 quantity purchased Q-10.	1915 July, August, September.	1917 July, August, September, Q-1.	1917 October, November, December, Q-2.	1918 January, February, March, Q-3.	1918 April, May, June, Q-4.	1918 July, August, September, Q-5.	1918 October, November, December, Q-6.	1919 January, February, March, Q-7.
GROCERIES.										
Dried fruits—										
Apples.....	Pound	36,100	.0672	.105	.145	.1378	.1497	.1265	.1442	.1295
Apricots.....	Pound	23,080	.0635	.135	.1364	.1388	.145	.1176	.1441	.1425
Currents.....	Pound	2,525	.0735	.1825	.....	.20	.2825	.21	.20	.2375
Figs, White.....	Pound	21,310	.0459	.0775	.0825	.091	.1310	.141	.1328	.161
Peaches.....	Pound	34,840	.0368	.0675	.11625	.104	.1135	.1145	.124	.1325
Prunes.....	Pound	41,300	.0874	.1025	.11025	.09	.0879	.0924	.1048	.1265
Raspberries.....	Pound	5,950	.0659	.0819	.08	.071	.1825	.085	.1123	.1060
Raspins, Cal., seedless.....	Pound	20,875	.0648	.0875	.0875	.085	.0905	.0925	.1143	.11
Raspins, seeded muscatel.....	Pound	4,100	.065	.06375	.07625	.0792	.08	.0865	.0988	.1063
Canned Goods—										
Apples, No. 10 tins.....	Dozen	182	2.30	3.69	4.95	4.85	4.45	4.15	5.00	4.50
Cherries, red No. 10 tins.....	Dozen	1184	6.33	9.58	10.80	1.124	10.75	12.00	13.50	11.00
Corn, No. 2 tins.....	Dozen	533	.6975	1.475	1.12	1.124	1.224	1.85	1.54	1.54
Pears, No. 10.....	Dozen	176	3.47	4.85	6.70	5.15	4.93	5.57	7.39	7.59
Pears, No. 2 tins.....	Dozen	538	.665	1.33	1.425	1.235	1.38	1.50	1.47	1.45
Pineapple, sliced No. 24.....	Dozen	328	1.575	2.39	2.45	.....	2.29	2.90	3.40	3.235
Tomatoes, No. 10 tins.....	Dozen	172	2.18	5.95	6.78	6.29	8.51	7.49	6.80	6.25
Beans, cereals, etc.—										
Beans, lima.....	Pound	50,220	.0533	.13	.14375	.134	.1450	.1332	.1348	.1115
Beans, navy.....	Pound	74,840	2.94	8.63	8.56	7.89	7.40	6.45	.105	5.40
Beans, red.....	Pound	36,250	3.60	5.54	6.17	5.49	5.64	5.72	4.47	5.33
Farina.....	Case	68	1.25	2.25	2.15	2.49	2.40	2.38	2.52	2.29
Rolled oats, 90 lb. bags.....	Pound	63,330	.0279	.0545	.0468	.057	5.95	.0607	.054	.0449
Cornmeal, white.....	Pound	44,100	.0189	.056	.0401	.041	.043	.0435	.0435	.0362
Cornmeal, yellow.....	Pound	13,500	.0189	.056	.0410	.039	.0415	.0390	.0405	.0375
Hominy grits.....	Pound	17,000	.02	.0583	.0443	.052	.0439	.0513	.05	.0389
Macaroni, broken.....	Pound	38,050	.03375	.0935	.0746	.0736	.0675	.0815	.08	.067
Noodles.....	Pound	8,350	.0438	.0825	.08	.08	.101	.09	.08	.0815
Peas, split.....	Pound	27,925	.0537	.0881	.09	.....	.0887	.0885	.06	.0789

COMPARATIVE STATEMENT—Continued.

Article.	Measure.	1915 quantity purchased Q-10.	1917 July, August, September. Q-1.	1918 October, November, December. Q-2.	1918 January, February, March. Q-3.	1918 April, May, June. Q-4.	1918 July, August, September. Q-5.	1918 October, November, December. Q-6.	1919 January, February, March. Q-7.
Potatoes—									
Potatoes, carlots.....	Bushel	26,700	.56	1.25	1.28	1.18	.70	1.59	1.11
Miscellaneous—									
Apple butter, 30 lb. pails.....	Pound	21,580	.0375	.04	.07	.075	.085	.091	.09
Chickens, American.....	Pound	23,885	.15	.215	.275	.32	.375	.3150	.3735
Crackers, soda.....	Pound	21,100	.054	.0858	.105	.1349	.12	.131	.1275
Crackers, oyster.....	Pound	5,844	.085	.098	.105	.124	.1249	.14	.1275
Crackers, Graham.....	Pound	1,920	.05	.0775	.115	.149	.11	.14	.1350
Gingerbread.....	Pound	1,920	.05	.0775	.095	.095	.11	.1175	.0998
Minced meat (in barrels).....	Pound	11,400	.035	.0725	.0875	.0875	.0875	.08	.0885
Sugar, tea and coffee—									
Sugar, cane, (in carlots).....	Pound	248,450	.0609	.0867	.0774	.07894	.07811	.0968	.095
Sugar, beet.....	Pound	42,200	.0412	.0815	.0774	.0780	.0890	.0873	.095
Sugar, C No. 6.....	Pound	36,300	.0540	.07875	.0787	.0737	.0750	.0853	.0875
Sugar, powdered.....	Pound	2,700	.0945	.0897	.09125	.0811	.0840	.10350	.10438
Coffee, roasted.....	Pound	60,400	.1375	.14125	.1375	.141	.121	.151	.1575
Tea, Japan.....	Pound	9,330	.245	.23575	.2318	.2372	.25	.28	.25
Flour, hard wheat.....	Barrel	7,764	4.77	10.911	10.40	10.20	11.10	10.45	9.94
Flour, soft wheat.....	Barrel	69	4.60	10.551	10.15	11.00	10.30	10.00	9.90
Butterine—									
Butterine, 2 lb. prints.....	Pound	146,530	.117	.219	.2262	.2360	.23	.261	.265
Butterine, 60 lb. tubs.....	Pound	12,730	.1125	.212	.2263	.2310	.22	.251	.26
Meats, fresh—									
Forces, beef.....	Pound	371,500	.0891	.105	.1275	.1425	.1975	.1450	.1650
Hinds, beef.....	Pound	114,133	.1171	.145	.15	.1275	.22	.117	.1675
Hinds, beef.....	Pound	55,900	.05875	.09	.115	.125	.10	.1250	.115
Pork loins.....	Pound	18,100	.14625	.2595	.2625	.245	.28	.36	.2635
Pork shoulders.....	Pound	21,400	.11875	.206	.2525	.2412	.28	.37	.225
Liver.....	Pound	32,410	.0775	.10	.13	.105	.0975	.1047	.0985
Chucks.....	Pound	62,375	.06125	.125	.165	.14575	.1875	.1647	.198
Mutton.....	Pound	7,000	.10375	.1857	.22	.17	.24	.2285	.2140
Tongue, beef.....	Pound	1,600	.16	.25	.21	.24	.21	.27	.265

Meats, cured—									
Bacon.....	21, 120	1408	309	3402	3290	339	36	40	3565
Pound.....	25, 900	0942	1225	149	1790	1925		1940	1960
Corned beef.....	20, 900	14525	22	2505	2550	2790	28	30	3190
Pound.....	700	106	1887	2156	21	2090	211	23	2385
Ham, California.....	6, 050	0698	2290	254	2440	2690		243	225
Ham, skinned.....	27, 750	0718	1133	134	10	1420	125	1390	1090
Head cheese.....	61, 450	0915	1646	2156	2272	23	2176	2310	2293
Lard, compound.....	92, 015	0715	114	12925	125	1390	1290	1325	1290
Bologna.....	25, 165	0648	134	1425	1440	1490	1422	1575	1415
Frankfurters.....	9, 900	0618	104	105	10	1020	10	11	1065
Liver sausage.....	25, 165	06	134	1535	1475	1590	16	1669	1465
Pork sausage.....	8, 020	1042	2244	264	25	25125	25875	2640	2490
D. S. sides.....									
Dry goods—									
Muslin, bandage 36".....	1, 500	0348	06	06	07	10			0690
Cotton sheeting, bleached 42".....	4, 600	0874	1847	214	24	284	314	30	2370
Yard.....	5, 600	164	305	335	38	424	495	4540	3970
Yard.....	1, 000	174	3394		405			4740	
Yard.....	2, 700	1925			4375	60	60	68	4730
Yard.....	100	2225	40		49	65	65		5350
Cotton sheeting, unbleached—									
6-4.....	8, 200	1248	25		307	395	4050	36	3940
7-4.....	22, 600	1425	2637	298	342	39	51	40	3430
8-4.....	2, 000	162	283	339	369	505	505		4075
Yard.....	2, 100	21375	3347	387	50	48	55	52	44
Yard.....	7, 350	14	20	22	265	395	375	36	3991
Flannel tubing.....	8, 000	0748			174	225		2170	185
Percale 36" white ground.....	8, 750	064	155	168	16	219	25	26	18
Hickory shirting.....	11, 350	064	175	145	20	285	34	242	
Denim.....	26, 600	12	30	32	325	395	43	38	3260
Table cloth, merc. 36".....	710	3797	868		375		625		
Table cloth, merc. 66".....	4	415	95		575		825		575
Table cloth, merc. 72".....	545	1479	98		70		95	125	125
Table cloth, linen damask.....	450	100	1025				120	1925	3175
Repkina, linen damask.....	60	278	300		250	225			
Toweling, unbleached 15".....	6, 550	090	1486		185		15		1960
Crash, bleached 17".....	24	1084	1697		16		215		
Towels, Turkish.....	25	134	235		30	380	40	325	425
Wash rags.....	25	130	225		225		275	285	240
Yard.....		305	40				325	55	45

COMPARATIVE STATEMENT—Continued.

Article.	Measure.	1919 April, May, June, Q—8.	1919 July, August, September, Q—9.	1919 October, November, December, Q—10.	1920 January, February, March, Q—11.	1920 April, May, June, Q—12.	1920 July, August, September, Q—13.	1920 October, November, December, Q—14.	1921 January, February, March, Q—15.	1921 April, May, June, Q—16.
GROCERIES.										
Dried fruits—										
Apples.....	Pound	.1425	.1425	.165	.1925	.1525	.11	.10	.0820	.0642
Apricots.....	Pound	.1475	.2675	.2925	.2875	.2225	.2325	.1650	.151	.1357
Cherries.....	Pound	.20	.2569	.2060	.2037	.1581	.104	.1042	.1415	.1275
Figs white.....	Pound	.1425	.15	.1545	.1475	.0953	.104	.0953	.091	.09
Peaches.....	Pound	.1525	(Bids rei.)	.2087	.2032	.157	.1860	.163	.121	.104
Prunes.....	Pound	.1065	.1625	.18	.1727	.14	.144	.111	.0670	.081
Raisins, loose muscatel.....	Pound	.1125	.14	.1649	.1899	.2345	(Bids rei.)	.26	.20	.171
Raisins, Cal seedless.....	Pound	.1007	.1389	.1640	.1825	.2175	.2325	.231	.22	.181
Raisins, seeded muscatel.....	Pound	.1030	.0949	.1475	.1865	.2065	.2125	.2325	.21	.21
Canned goods—										
Apples, No. 10 tins.....	Dozen	4.50	5.25	6.98	6.13	5.00	5.50	4.96	4.50	4.65
Cherries, red No. 10 tins.....	Dozen	14.88	(No bids)	17.50	15.18	17.60	15.85	12.42	11.45	11.10
Corn, No. 2 tins.....	Dozen	1.2675	1.355	1.37	1.24	1.225	1.39	1.23	.89	.89
Pears, No. 10.....	Dozen	8.00	7.76	8.65	10.17	6.25	9.50	5.85	7.24	6.75
Pears, No. 2 tins.....	Dozen	1.35	1.345	1.18	1.32	1.25	1.395	1.02	.92	1.00
Pineapple, sliced No. 2½.....	Dozen	3.50	(Bids rei.)	4.42	4.32	4.25	4.99	3.81	3.13	3.00
Tomatoes, No. 10 tins.....	Dozen	6.15	5.85	6.32	5.69	5.35	5.50	4.42	4.45	4.65
Beans, cereals, etc.—										
Beans, lima.....	Pound	.064	.0651	.1144	.1103	.0998	.0762	.0673	.057	.0646
Beans, navy.....	Pound	Bu. 4.14	.0726	.06	.0655	.0625	.0715	.0518	.047	.0424
Beans, red.....	Pound	Bu. 4.02	.0651	.0671	.0693	.0543	.0698	.0570	.052	.0621
Farina.....	Case	Bu. 2.20	(Bids rei.)	2.10	2.55	2.19	2.82	2.49	2.09	2.10
Rolls oats, 90 lb. bags.....	Pound	.035	.042	.0436	.0474	.0455	.06	.04035	.0334	.0288
Cornmeal, white.....	Pound	.032	.0426	.0365	.037	.03782	.0425	.021	.0207	.017
Cornmeal, yellow.....	Pound	.....	.04	.0365	.037	.0399	.0405	.0291	.0207	.017
Hominy, broken.....	Pound	.335	.0443	.415	.0389	.0399	.047	.0289	.0213	.0176
Macaroni, split.....	Pound	.057	.065	.0675	.0705	.06	.0725	.07	.0605	.05
Noodles.....	Pound	.075	.072	.0874	.0805	.079	.0845	.0835	.0790	.0695
Pears, split.....	Pound	.0655	.0646	.0725	.0748	.0625	.0675	.0630	.0661	.0654
Potatoes—										
Potatoes, earlots.....	Bushel	1.67	1.57	1.39	2.09	3.48	3.83	1.09	.87	.57

DIVISION OF PURCHASES AND SUPPLIES.

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DIVISION OF PURCHASES AND SUPPLIES.

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SUMMARY.

	1920-1921, year ending June 30, 1921.	1919-1920, year ending June 30, 1920.
Groceries.....	\$640,341 89	\$792,713 72
Flour.....	266,976 99	324,205 47
Butterine.....	118,900 19	173,452 58
Meats.....	473,480 94	510,271 39
Total.....	\$1,499,700 01	\$1,800,643 06

AVERAGE EXPENDITURES FOR GROCERIES, FLOUR, BUTTERINE AND MEATS DURING YEAR ENDING JUNE 30, 1921 COMPARED WITH YEAR ENDING JUNE 30, 1920—BASED ON AVERAGE QUARTERLY REQUIREMENTS.

Article.	1920-1921, year ending June 30, 1921.	1919-1920, year ending June 30, 1920.
Dried fruits—		
Apples.....	\$ 10,721 62	\$ 19,640 25
Apricots.....	16,316 41	24,695 60
Currants.....	1,504 82	2,069 63
White figs.....	8,050 91	11,538 30
Peaches.....	20,459 79	20,168 67
Prunes.....	18,461 09	27,066 51
Raisins, loose muscatel.....	3,768 31	4,239 35
Raisins, Cal. seedless.....	18,526 55	14,751 32
Raisins, seeded muscatel.....	3,546 50	2,617 44
Canned goods—		
Apples, No. 10 tins.....	3,569 02	4,251 52
Cherries, red No. 10 tins.....	5,996 76	5,933 04
Corn, No. 2 tins.....	2,345 20	2,766 28
Pears, No. 10 tins.....	5,153 84	5,778 08
Pears, No. 2 tins.....	2,332 23	2,749 11
Pineapple, sliced 2½.....	4,897 04	4,260 72
Tomatoes, No. 10 tins.....	3,271 44	3,992 12
Beans, cereals, etc.—		
Beans, Lima.....	12,811 12	20,550 11
Beans, Navy.....	15,918 47	19,578 14
Beans, red.....	8,732 63	8,910 27
Farina.....	646 00	465 12
Rollod oats, 60 lb. bags.....	10,294 29	11,207 41
Cornmeal, white.....	4,817 92	6,788 09
Cornmeal, yellow.....	1,448 55	2,061 45
Hominy grits.....	1,951 60	2,798 20
Macaroni, broken.....	9,626 66	9,246 16
Noodles.....	2,634 43	2,662 81
Peas, split.....	6,634 07	7,662 62
Potatoes—		
Potatoes, in carlots.....	169,812 00	227,751 00
Miscellaneous—		
Apple butter, 30 lb. pails.....	8,134 58	7,837 06
Cheese, American.....	22,392 18	27,109 47
Crackers, soda.....	10,233 58	10,506 33
Crackers, oyster.....	511 40	535 15
Crackers, graham.....	3,266 80	3,395 36
Gingersnaps.....	950 02	806 44
Minced meat, in barrels.....	4,314 90	3,149 83
Sugar—		
Sugar, cane.....	111,601 97	143,107 20
Sugar, beet.....	38,476 38	21,967 63
Sugar, C No. 6.....	17,663 58	18,291 67
Sugar, powdered.....	1,553 85	1,170 18
Tea and coffee—		
Coffee, roasted.....	45,409 12	68,931 60
Tea, Japan.....	8,126 71	9,607 29

COMPARATIVE STATEMENT—Continued.

Article.	Measure.	1919 April, May, June, Q—8.	1919 July, August, September, Q—9.	1919 October, November, December, Q—10.	1920 January, February, March, Q—11.	1920 April, May, June, Q—12.	1920 July, August, September, Q—13.	1920 October, November, December, Q—14.	1921 January, February, March, Q—15.	1921 April, May, June, Q—16.
GROCERIES.										
Dried fruits—										
Apples.....	Pound	.1425	.1425	.165	.1925	.1525	.11	.10	.0820	.0642
Apricots.....	Pound	.1475	.2675	.2625	.2675	.2225	.2325	.1650	.181	.1357
Currents.....	Pound	.20	.2669	.2050	.2937	.1581	.1842	.1610	.1415	.1275
Figs, white.....	Pound	.1425	.15	.1545	.1475	.0969	.104	.0953	.091	.09
Peaches.....	Pound	.1525	(Bids rej.)	.2087	.2032	.167	.1360	.165	.121	.101
Prunes.....	Pound	.1065	.1625	.18	.1727	.14	.144	.111	.0970	.081
Raisins, loose muscatel.....	Pound	.1125	.14	.1649	.1899	.2345	(Bids rej.)	.26	.20	.171
Raisins, Cal. seedless.....	Pound	.1097	.1369	.1640	.1826	.2175	.2325	.231	.22	.181
Raisins, seeded muscatel.....	Pound	.1030	.0949	.1475	.1865	.2065	.2125	.2325	.21	.21
Canned goods—										
Apples, No. 10 tins.....	Dosen	4.50	5.25	6.98	6.13	5.00	5.50	4.96	4.50	4.65
Cherries, red No. 10 tins.....	Dosen	14.88	(No bids)	17.50	15.18	17.60	15.85	12.42	11.45	11.10
Corn, No. 2 tins.....	Dosen	1.2575	1.355	1.37	1.24	1.225	1.39	1.23	.89	.89
Pears, No. 10.....	Dosen	8.00	7.76	8.65	10.17	6.25	9.50	5.85	7.24	6.75
Pears, No. 2 tins.....	Dosen	1.35	1.345	1.18	1.32	1.25	1.365	1.02	.92	1.00
Pineapple, sliced No. 2½.....	Dosen	3.50	(Bids rej.)	4.42	4.32	4.25	4.99	3.81	3.13	3.00
Tomatoes, No. 10 tins.....	Dosen	6.15	5.85	6.32	5.69	5.35	5.50	4.43	4.45	4.65
Beans, cereals, etc.—										
Beans, lima.....	Pound	.064	.0631	.1144	.1103	.0998	.0762	.0673	.057	.0546
Beans, navy.....	Pound	Bu. 4.14	.0736	.06	.0655	.0625	.0715	.0518	.047	.0424
Beans, red.....	Pound	Bu. 4.02	.0631	.0671	.0693	.0543	.0570	.0570	.053	.0621
Farina.....	Case	2.20	(Bids rej.)	2.10	2.55	2.19	2.82	2.49	2.09	2.10
Rolling oats, 90 lb. bags.....	Pound	.035	.042	.0436	.0474	.0455	.06	.04035	.0334	.0288
Cornmeal, white.....	Pound	.032	.0426	.0365	.037	.03782	.0425	.021	.021	.017
Cornmeal, yellow.....	Pound	.....	.04	.0365	.037	.0392	.0405	.0291	.0207	.017
Hominy, grits.....	Pound	.335	.0443	.415	.0389	.0398	.047	.0289	.0213	.0176
Macaroni, broken.....	Pound	.057	.055	.0575	.0705	.06	.0725	.07	.0605	.05
Noodles.....	Pound	.075	.072	.0874	.0805	.079	.0845	.0630	.0790	.0695
Pasta, split.....	Pound	.0655	.0646	.0725	.0748	.0625	.0675	.0630	.0631	.0624
Potatoes—										
Potatoes, carlots.....	Bushel	1.67	1.57	1.39	2.09	3.48	3.83	1.09	.87	.57

DIVISION OF PURCHASES AND SUPPLIES.

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compare to advantage with other university groups of the highest types. The site, about ten acres in extent, adjoins the Cook County Hospital. Located in this somewhat congested and none too attractive district of the city, but a situation having very positive advantages as an assured source of clinical material, the hospital has exercised the privilege of turning its back, as it were, upon its surroundings and making its own beauty within its domain. The various buildings of the hospital are grouped around the perimeter of the site enclosing a number of medium sized courts and a large central quadrangle. In general, the rooms for the use of patients are on the sides towards the court and quadrangle, while the less quiet and attractive frontage towards the street is devoted to hospital utilities, ward examination rooms and laboratories. The courts and quadrangles will eventually receive such planting and landscape treatment as will make them a pleasant recreation scape for convalescent patients and an attractive outlook for the wards.

The construction of the buildings throughout is of the most permanent and substantial character. The windows are steel casements hung in steel frames, of a size to furnish the average ward from 15 per cent to 20 per cent glass area to floor area. The facades are of Illinois brick which presents sufficient variety in color and texture to approximate the weathered effect of old English brickwork. Bases, string courses, copings and window trim are of Indiana limestone. The roof is fire-flashed interlocking shingle tile. Ornamentation has been introduced sparingly, the reliance for architectural effect being placed in proportion of parts, well studied detail and dignity of material.

The cabinet work, interior stone work, marble work, bronze and wrought iron work of the Centennial Memorial Building, which will be dedicated this summer, has been completely redesigned.

The Museum Building in the Old Salem State Park was completed and the park inaugurated by Governor Small on May 19, 1921.

The restoration of the village to its appearance during Lincoln's residence is being prosecuted. Painstaking and thorough, the work of establishing the authenticity of the emplacement and the exactness and historical accuracy of the reproduction is being undertaken with a reverence worthy of archaeologists devoted to their calling. The Museum Building, the only new comer, fronts the main square where an outlook over the picturesque winding of the Sangamon discloses a view whose beauty will be a revelation to those acquainted with our State only from the window of a rapidly moving train. Built of a native stone, such as the original builders quarried from a ledge a few hundred feet north of the village, the building reproduces one of the old mansions of an early Illinois aristocracy, some of whose hospitable homes are still standing in the older part of the State and whose charm and comfort give evidence of the existence of a cultivated social and domestic life in the days of Illinois' first settlement that few suspect.

The armories under construction at Danville and Kankakee are planned with large drill floors, suitable locker, company, officers' and other military quarters and an assembly hall for small gatherings. It was felt that the architectural treatment of these buildings should be in a dignified classical style in keeping with the other public buildings of their cities. The military purpose is expressed by adequate wall surface, rugged scale and severe detail. One hundred and twenty-two thousand dollars was available for the building at Kankakee, and \$192,000 for the Danville armory. Progress has been made on sketches for an armory at Peoria, and the armory for the First Field Artillery at Chicago. The appropriation set aside by the last General Assembly for the construction of new buildings under the direction of the Division of Architecture and Engineering aggregates \$6,204,000. The appropriations for repairs under the supervision of the Division of Architecture and Engineering amount to \$2,765,000.

While building costs during the past year have been more favorable than in 1920, it is acknowledged that current prices were higher than at any other period here before, yet in the instances of the building contracts let by the State the costs have been very satisfactory, the cost per patient of the ward building being built at Alton does not exceed \$400, while ward buildings built in 1915 cost \$580.

The writer, before closing, desires to add a word of appreciation of the close interest and encouragement of Governor Len. Small in all of the work of his division. Governor Small was never too occupied to find time to give his close attention to the innumerable details of planning and design. The Supervising Architect was always certain of consideration and advice on his problems, a decision in matters of difficulty, and entire support in the carrying out of his work. It is needless to say that under such conditions the complete loyalty of every member of the personnel of his office was enlisted and their utmost capability given to the performance of their duties.

DIVISION OF PRINTING.

H. L. WILLIAMSON, *Superintendent.*

The Division of Printing is one of the six divisions of the Department of Public Works and Buildings, and is under the administration of the Superintendent of Printing, who is charged with placing orders for: Printing, binding, ruling, lithographing, embossing (steel die), engraving (photo and copper plate), eradicators, pens, pencils, stapling and numbering machines, stenographers' books, paste, mucilage, sponge cups, paper weights, scissors, ink wells, pen racks, sponges, brass paper fasteners, erasers (rubber or steel), rubber bands, gold seals, art gum, pen holders, record books (loose leaf or tight bound), typewriter ribbons and oil, letter clips, key rings, rulers, paper (all kinds, including toilet paper), ink (writing, printing or drawing), print shop supplies; multi-graph, neostyle, stenotype and mimeograph supplies; supplies for filing cabinets, loose leaf binders; newspaper advertising, school supplies, blue print paper.

In addition to above, any other article for office use, except equipment.

These supplies are purchased for all the elective State officers, the Appellate Courts, Supreme Court, charitable and penal institutions, Normal Universities, State Fair, Teachers' Pension and Retirement Association, all departments under the Civil Administrative Code, Constitutional Convention, and the General Assembly.

CONTRACTS.

Most of these supplies are bought under the following contracts, which are for the period beginning July 1, 1919, and ending June 30, 1921:

Printing, First Class—Legislative bills, resolutions and conference reports. Phillips Brothers, Springfield, Illinois.

Printing, Second and Third Classes—Legislative journals, synopsis, legislative digest, reports of committees, session laws, and all reports bound in cloth or leather or partly bound in cloth, leather or paper. Illinois State Journal Co., Springfield, Illinois.

Printing, Fourth Class—Statements, briefs and abstracts for the Attorney General. Phillips Brothers, Springfield, Illinois.

Printing, Fifth Class—Election registers. Illinois Printing Co., Danville, Illinois.

Printing, Sixth Class—Pamphlets, reports and documents with paper covers. Illinois Printing Co., Danville, Illinois.

Printing, Seventh Class—All printing not included in previous classes and all blanks and forms. Illinois State Journal Co., Springfield, Illinois.

Lithographing—Illinois Lithographing and Label Co., Chicago, Illinois.

Binding—Jefferson Printing Co., Springfield, Illinois.

Paper, Class 1—Book paper. Bradner Smith & Co., Chicago, Illinois.

Paper, Class 2—Bond and writing paper. Whiting Paper Co., Chicago, Illinois.

Paper, Class 3—Cover, bristol, manila and blotting. Bradner Smith & Co., Chicago, Illinois.

Paper, Class 4—Wrapping paper, twine and toilet paper. Bradner Smith & Co., Chicago, Illinois.

Paper, Class 5—Commercial and manila envelopes. Bradner Smith & Co., Chicago, Illinois.

Stationery Supplies—Illinois Printing Co., Danville, Illinois.

Typewriter Supplies—Miller-Bryant-Pierce Co., Aurora, Illinois.

On all requisitions for work or supplies not under contract quotations are asked for and order placed with lowest bidder. All quotations are filed with the requisition and are open to public inspection.

All the printing contracts contain clauses specifying "paper to be furnished," "uniform size and style," "type to be used," etc.

The contracts for paper specify "standards of quality," etc., while the contracts for stationery and typewriter supplies specifies the "contractor's duties" and guards against "unreasonable delay."

The contract for binding contains similar clauses.

These contracts are published in a book of 126 pages, a copy of which can be secured by any person interested sending their address to the Superintendent of Printing.

APPROPRIATION FOR PRINTING.

The appropriation for printing for the twenty-four months ending June 30, 1921, for the elective officers, courts, departments, etc., was made to the Department of Public Works and Buildings in one sum.

The following table shows the amount appropriated, bills passed for payment, balance and per cent unexpended:

STATE OF ILLINOIS—DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—DIVISION OF PRINTING.

Department.	Appropriation.	Bills passed.	Balance.	Per cent. un-expended
Adjutant General.....	\$ 13,000	\$ 11,588	\$ 1,412	10.86
Agriculture.....	40,820	40,520	400	.98
Appellate Court, 1st.....	2,800	2,730	70	2.50
Appellate Court, 2d.....	800	761	49	6.125
Appellate Court, 3d.....	1,600	1,479	121	7.56
Appellate Court, 4th.....	660	620	40	6.00
Attorney General.....	25,000	24,997	3	.01
Auditor.....	50,000	49,616	384	.77
Civil Service.....	10,000	9,824	176	1.76
Farmers' Institute.....	32,000	31,335	665	2.078
Finance.....	27,500	27,360	140	.51
Governor.....	2,000	1,995	5	.25
Historical Library.....	20,400	20,397	3	.01
Illinois Teachers' Association.....	5,000	3,110	1,890	37.80
Labor.....	18,200	18,156	44	.24
State Library.....	4,000	2,674	1,326	33.15
Library Extension.....	2,000	1,991	9	.45
Legislative Reference Bureau.....	11,000	10,330	670	6.09
Lieutenant Governor.....	500	496	4	.80
Mines and Minerals.....	9,000	8,589	411	4.56
Public Health.....	35,000	34,067	913	2.60
Public Welfare.....	60,000	59,999	1	.00
Public Works and Buildings.....	49,680	49,659	21	.04
Registration and Education.....	58,200	57,953	247	.42
Secretary.....	175,000	174,994	6	.003
Supreme Court Clerk.....	4,400	4,277	123	2.79
Superintendent Public Instruction.....	60,000	56,729	3,271	5.45
Trade and Commerce.....	90,500	84,229	6,271	6.93
Treasurer.....	6,000	5,973	27	.45
Uniform Laws Commission.....	400	86	314	78.50
Pension Laws Commission.....	700	650	50	7.14
52d General Assembly—				
House.....	82,500	24,584	57,916	70.20
Senate.....	82,500	28,361	54,149	65.63
	\$981,260	\$850,129	\$131,131	13.37

In addition to above, purchases were made for the following institutions and divisions for which the appropriations were made direct to the institutions and divisions:

State Beekeepers' Association.....	\$ 1,138.43
G. A. R.....	1,750.44
Supreme Court.....	3,005.63
Penitentiary Commission.....	718.05
Centennial Commission.....	1,423.38
State Poultry Association.....	182.45
Teachers' Pension and Retirement.....	3,546.74
State Fair (Inc. ads).....	25,705.80
State Firemen's Association.....	1,054.75
State Horticultural Society.....	4,524.49
Physically Handicapped Survey.....	101.24
War History (Historical Library).....	1,567.81
World War (Historical Library).....	46,140.04
Vicksburg Commission.....	4.75
State Dairymen's Association.....	883.70
Social Hygiene.....	2,970.84
University of Illinois.....	17.31
Vocational Education.....	2,913.26
Immigrants' Commission.....	21.20
Women's Prison.....	105.54
State Geological Survey.....	468.16
Elgin State Hospital.....	1,320.06
Kankakee State Hospital.....	5,114.44
Jacksonville State Hospital.....	1,750.70
Anna State Hospital.....	1,603.82
Watertown State Hospital.....	2,267.71
Peoria State Hospital.....	1,318.43
Chester State Hospital.....	389.40
Chicago State Hospital.....	2,304.45
Alton State Hospital.....	1,737.85

DIVISION OF PRINTING.

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Lincoln State School and Colony.....	\$ 1,239.86
State Colony for Epileptics.....	445.76
Illinois School for Deaf.....	1,747.41
Illinois School for Blind.....	768.91
Illinois Industrial School for Blind.....	192.02
Illinois Soldiers' and Sailors' Home.....	1,839.67
Illinois Soldiers' Widows' Home.....	57.40
Illinois Soldiers' Orphans' Home.....	418.35
Illinois Charitable Eye and Ear Infirmary.....	597.32
Illinois State Training School for Girls.....	1,747.86
St. Charles School for Boys.....	3,921.28
Illinois State Penitentiary.....	17,694.83
Southern Illinois Penitentiary.....	222.15
Illinois State Reformatory.....	5,276.64
Illinois State Normal University.....	128.88
Northern Illinois State Normal University.....	183.35
Southern Illinois State Normal University.....	2,121.43
Western Illinois State Normal University.....	3,541.54
Eastern Illinois State Normal University.....	4,526.03
Constitutional Convention	29,632.95
Total	\$192,349.51

PAPER AND STATIONERY SUPPLIES.

Paper and stationery supplies are purchased by the Division of Printing from the six contractors, referred to under the heading of "contracts" on a preceding page, and also on quotations. The wants of the different elective officers, departments, divisions, institutions, courts, etc., are anticipated, as far in advance as possible, and paper and stationery supplies are purchased in large quantities and stored so that requisitions can be filled promptly.

All purchases are made with the transportation f. o. b. Springfield or destination of order.

The inventory of paper stock and supplies on hand July 1, 1921. follows:

State House basement.....	\$ 9,046.26
Old State Arsenal.....	42,968.44
Hillier's Transfer & Storage Company.....	14,541.69
H. A. Liedel & Sons.....	4,190.50
Illinois State Journal.....	1,876.86
Phillips Brothers	8,280.74
Schnepf & Barnes.....	10,593.50
Jefferson Printing Company.....	8,804.31
Illinois Printing Company.....	19,519.77
Illinois Lithograph & Label Company.....	13,742.04
Western States Envelope Company.....	3,160.23
Illinois State Reformatory.....	26,665.89
In transit from one contractor to another.....	8,885.08
Miscellaneous	55.41
Supply Department	15,623.31

Total **\$183,884.03**

A modern system of keeping accurate account of stock is maintained by the division. Just as a banker can tell any patron the exact amount of his balance at any time, so this division can tell anyone interested what amount of stock is available, and where stored. A comprehensive stockbook, from which stock is charged off as used, is the governing book of the system.

STORE ROOM WITH POWER CUTTER.

The store room is located in the basement of the State House with a power cutter intact. This has proven to be quite a saving as well as a convenience. In this store room the stock is cut to suit the needs of the

different offices. All scratch pads are made from scraps of paper and obsolete blanks and these pads are furnished to the different departments and institutions free. This item saves many dollars during the year.

ORDERS AND REQUISITIONS.

The routine of a requisition originating in a code division is typical of all requisitions. The division or department wishing printing makes out the printing requisition which is uniform for all ordering. This requisition bears a serial order and is signed by the officer in charge where the requisition originates.

In the case of divisions, the requisition is forwarded to the proper department. Here it is O. K.'d, if satisfactory to the Director, and then transmitted to the Department of Finance. If satisfactory to that department, after scrutiny, the requisition is forwarded to the Department of Public Works and Buildings, O. K.'d there and then transmitted to the Division of Printing. Here the requisition is scanned particularly to see if the specifications call for any further information and to note if the proposed expenditure is within the remainder of the available appropriation.

The requisition now bears the O. K. of the Directors of two departments, including that of the Department of Finance: and before placing, the additional O. K. of the Superintendent of Printing. As a result of this routine, there is no chance that either anything can be ordered from the printing appropriation which does not come strictly within the scope and intent of that appropriation, or that the one requisitioning may unwittingly overdraw his appropriation.

After a requisition is approved in this division it is assigned to the proper section for attention. For instance, a requisition asking for printing is assigned to the printing estimator and a cost ticket is written showing the actual amount to be paid for the work. This cost ticket also shows the size, weight, color and amount of stock to be used and from what storage it is to be supplied. Then the requisition is passed on to the order writer who makes the necessary orders in quintuplicate. The original copy of the order is sent to the contractor. The duplicate copy remains in the office of the Superintendent of Printing for his records. The triplicate copy is sent to the Secretary of State for the information of his shipping department, and the quadruplicate and quintuplicate copies are sent to the department making the requisition so they can be advised of the purchase. The quadruplicate copy remains in the possession of the department until delivery is made by the contractor, when the department signs, in a place provided for the signature, acknowledging receipt of the goods and returns to the Division of Printing. Upon receipt of this information the Division of Printing approves the invoice of the contractor and forwards it for payment. The quintuplicate copy is retained by the department as a permanent record.

During the period of July 1, 1920, to June 30, 1921, 15,520 orders were written.

ACCOUNTING WORK.

The copies of the order going to the department from time to time, showing the cost of the purchase, enables them to keep a check on their appropriation, and this is supplemented by a monthly report to all departments, showing expenditures made, the bills which have not been paid, the amount of the contracts which have been entered into, the actual orders placed, and for which the goods and invoices have not been received. This report shows the departments the amount of their appropriation available for any further expenditure. This detail necessitates accurate accounting. Realizing this, the Department of Finance, after a study of this division's requirements, planned and provided a comprehensive, economical and uniform system of bookkeeping and accounting. This system has greatly reduced the nonproductive work of the division and has stood all tests in meeting every requirement for the accuracy so essential in recording work of a technical and involved character.

DISCOUNTS.

The Division of Printing has deducted during the past year \$5,434.45 from invoices for discount on bills. From July 1, 1917, to June 30, 1921, \$13,656.31 has been deducted from invoices for discounts on bills. This was made possible by prompt payment of bills.

Report of
THE DEPARTMENT OF PUBLIC WELFARE
From July 1, 1920 to June 30, 1921

STATE OF ILLINOIS.

THE DEPARTMENT OF PUBLIC WELFARE.

General Office. Springfield. Telephone, Capitol 1400.

C. H. JENKINS, *Director*.

JAMES E. MCCLURE, *Assistant Director*.

FRANK D. WHIPP, *Fiscal Supervisor*.

JOHN L. WHITMAN, *Superintendent of Prisons*.

LAWRENCE H. BECHERER, *Superintendent of Charities*.

WILL COLVIN, *Superintendent of Pardons and Paroles*.

CHARLES F. READ, M. D., *Alienist*.

HERMAN M. ADLER, M. D., *Criminologist*.

Division of Visitation of Adult Blind, 204 N. LaCrosse Avenue, Chicago.

CHARLES E. COMSTOCK, *Managing Officer*.

Division of Visitation of Children, Springfield.

CHARLES VIRDEN, *State Agent*.

State Psychopathic Institute, Dunning.

CHARLES F. READ, M. D., *Alienist*.

Institute for Juvenile Research, 721 S. Wood Street, Chicago.

HERMAN M. ADLER, M. D., *Criminologist*.

ILLINOIS STATE INSTITUTIONS.

Elgin State Hospital, Elgin, RALPH T. HINTON, M. D., *Managing Officer*; Patients 2,237, Employees 284.

Kankakee State Hospital, Kankakee, W. A. STOKER, M. D., *Managing Officer*; Patients 3,382, Employees 518.

Jacksonville State Hospital, Jacksonville, E. I. HILL, M. D., *Managing Officer*; Patients 2,277, Employees 294.

Anna State Hospital, Anna, CYRUS H. ANDERSON, M. D., *Managing Officer*; Patients 1,721, Employees 292.

Watertown State Hospital, Watertown, J. H. ELLINGSWORTH, M. D., *Managing Officer*; Patients 1,648, Employees 275.

Peoria State Hospital, Peoria, GEORGE A. ZELLER, M. D., *Managing Officer*; Patients 2,167, Employees 304.

Chester State Hospital, Menard, FRANK A. STURBLEFIELD, M. D., *Managing Officer*; Patients 190, Employees 33.

Chicago State Hospital, Dunning, DANIEL D. COFFEY, M. D., *Managing Officer*; Patients 3,504, Employees 494.

Alton State Hospital, Alton, C. E. TROVILLION, M. D., *Managing Officer*; Patients 741, Employees 99.

*Research and Educational Hospital, Chicago.

Lincoln State School and Colony, Lincoln, C. B. CALDWELL, M. D., *Managing Officer*; Patients 2,040, Employees 262.

Dixon State Hospital for Epileptics, Dixon, H. B. CARRIEL, M. D., *Managing Officer*; Patients 372, Employees 87.

*Dixon State Colony for Feeble-minded, Dixon.

The Illinois School for the Deaf, Jacksonville, COLONEL OSCAR C. SMITH, *Managing Officer*; Pupils enrolled 380, Employees 124.

The Illinois School for the Blind, Jacksonville, R. W. WOOLSTON, *Managing Officer*; •Pupils enrolled 225, Employees 77.

The Illinois Industrial Home for the Blind, 1900 Marshall Boulevard, Chicago, OTTO A. ELLIOTT, *Managing Officer*; Inmates 85, Employees 20.

The Illinois Soldiers' and Sailors' Home, Quincy, COLONEL JOHN W. REIG, *Managing Officer*; Members 1,069, Employees 169.

The Soldiers' Widows' Home of Illinois, Wilmington, MRS. NETTIE M. MCGOWAN, *Managing Officer*; Members 97, Employees 29.

The Illinois Soldiers' Orphans' Home, Normal, RALPH SPAFFORD, *Managing Officer*; Children 326, Employees 75.

The Illinois Charitable Eye and Ear Infirmary, 904 West Adams St., Chicago, LEO STEINER, M. D., *Managing Officer*; Patients 121, Employees 88.

The St. Charles School for Boys, St. Charles, COLONEL C. B. ADAMS, *Managing Officer*; Boys 811, Employees 115.

The State Training School for Girls, Geneva, MRS. LUCY D. BALL, *Managing Officer*; Girls 410, Employees 90.

• In course of construction.

Illinois State Penitentiary, Joliet, E. J. MURPHY, *Warden*; Prisoners 1,762; Employees 133.

Woman's Prison, Joliet, C. ELINOR RULIEN, *Superintendent*; Prisoners 36, Employees 12.

Southern Illinois Penitentiary, Menard, EDWARD P. PETRI, *Warden*; Prisoners 1,002, Employees 113.

Illinois State Reformatory, Pontiac, IRA M. LISH, *General Superintendent*; Prisoners 1,111, Employees 103.

Illinois State Farm, Vandalia, GEORGE A. BROWN, *Superintendent*; Prisoners 46, Employees 13.

Total Population—Inmates 27,760; Insane 17,867; Feeble-minded 2,040; Epileptics 372; Semi-educational 1,911; Penal 3,957; Patriotic 1,492; Eye and Ear 121; Officers and Employees 4,103.

(Population July 1, 1921.)

E. R. AMICK, *Chief Clerk*, General Office.



REPORT OF THE DIRECTOR.

C. H. JENKINS, *Director.*

This report covers one year, from July 1, 1920, up to and including June 30, 1921. For the period commencing July 1, 1920, and up to and including January 18, 1921, Mr. Charles H. Thorne was director of this department, being succeeded by myself on January 19, 1921. This report covers Mr. Thorne's administration and the period since I have been in charge of the department.

Every question before the State Department of Public Welfare is primarily a human problem which has to do with the unfortunate wards of the State of Illinois. The magnitude of the institution service, represented by its twenty-seven State charitable and penal institutions, with property valued at approximately twenty-eight millions of dollars, fades away, when one regards the institutions impersonally and reads the ideals they represent, the foundation for future progress in this work.

Illinois in the past has advanced in the scientific care and treatment of these unfortunate people in the State institutions and in their problems, and it will be my endeavor at all times to have this work continue to go forward in a way that will bring a betterment for humanity and which will be a credit to the present administration.

POPULATION.

Elsewhere in this report you will find a movement of population table, showing the admissions, discharges and deaths in the State institutions during the year ended June 30, 1921, but there is more recent information in regard to the number present in the institutions, which was compiled on December 1, 1921, the date of this report. At that date there was a total population present at all institutions of 28,349, which includes 18,099 insane, 2,087 feeble-minded, 407 in the epileptic hospital, 1,933 in the semi-educational institutions, 1,697 in the patriotic institutions, 127 house patients in the Eye and Ear Infirmary and approximately 50,000 receiving treatment every year in the free clinics connected with the infirmary, and 4,000 in the penitentiaries and reformatory. Owing to economic conditions, unemployment and general unrest in the business world, there has been a tremendous increase in the population of these institutions during the past year. Since December 1, a year ago, these increases have been: Insane 951, feeble-minded 40, epileptic 115, semi-educational 25, Eye and Ear Infirmary 16, and penitentiaries and reformatory 370. The only institutions showing a

decrease are the patriotic institutions—the Soldiers' and Sailors' Home, the Soldiers' Widows' Home and the Soldiers' Orphans' Home, where there was a total decrease of 72.

Almost every institution in the State, from a population standpoint, has reached the limit of its available accommodations. The increase in the number of insane has taxed the utmost housing facilities of the State hospitals, and many of them are crowded to such an extent that the conditions for improving these people, both mentally and physically, are unfavorable. The completion of the buildings at Elgin, Alton and Dixon will materially relieve the situation, but with these new buildings, the State will not be able to keep up its housing accommodations on the basis of the increasing number of insane.

ACCIDENTS.

During the year there have been few serious accidents in our State hospitals. Escapes are having constant vigilance on the part of the institution authorities. The liberal and humane treatment of the patients in our hospitals, no doubt, lessens the suicides and other tragedies which happen at all places where mental patients are cared for.

VOLUNTARY COMMITMENTS.

There has been an abuse of the voluntary form of commitment of insane to some of the State hospitals and certain changes should be made in the lunacy law to prohibit the voluntary admittance of patients charged with crime. There should also be a change in the commitment law so as to permit those suffering from mild mental and nervous troubles to apply direct to the institutions for treatment, thereby avoiding legal commitment except after a reasonable period when it is evident that lengthy medical treatment is advisable.

DIXON STATE HOSPITAL.

At the Dixon State Hospital there has been a continual change in the population, due to the law that permits epileptic patients to leave at will. During the past year there were 46 voluntary patients admitted and the same number discharged. Some have been discharged and re-admitted three or four times during the year, and as a result some of the patients do not stay long enough to get the benefit of the medical treatment. In my opinion the law should be amended to remedy this defect.

EPILEPTICS AND FEEBLE-MINDED.

At the Lincoln State School and Colony the number of so-called "guests" has increased. These are, in most part, the infant children of feeble-minded mothers who have been committed by the courts and which demand special nursing attention. Better facilities should be afforded this institution to care for its babies. There is a great demand for the admission of feeble-minded children. With the completion of

the new epileptic colony at Dixon, the present institution at Dixon now used for epileptics will be converted into a new institution for feeble-minded, thus greatly relieving the condition. It is apparent, however, that more housing facilities will have to be provided for the thousands of feeble-minded children in the State at large, which are in need of custodial care.

Some of the girls and boys from Lincoln State School and Colony have been paroled to neighbors and earn small daily and weekly wages which is sufficient to furnish them the articles of clothing they require. The superintendent reports that this plan has been working nicely.

DEPORTATION AGENT.

The deportation agent reports that a number of patients from State hospitals have been returned to their home states, as well as to foreign countries, including Mexico. Some of them have been sent as far south as South America.

BLIND.

The superintendent of the Illinois School for the Blind reports that of the 227 pupils enrolled, "25 per cent were blinded from Ophthalmia Neonatorum within a few days after birth and about 55 per cent were blinded from various diseases in early childhood. These children have naturally adapted themselves to delicate sense perception work, and quite readily learn to use their finger tips in reading embossed literature. About 20 per cent have lost their sight from various kinds of accidents."

Among the trades taught are weaving fine fabrics, rugs and carpets, baskets, brush and broom making, fibre furniture, piano tuning, telephone and switchboard operating, stenography and dictaphone operators. A number of graduates have been placed in positions.

The head of the Division of the Visitation of the Adult Blind states that 60 adults are stricken with blindness every year in Illinois, and that three-fourths of the 4,000 blind population in this State lost their sight in adult life. It is pleasing to know that this division has taken 7 blind men out of county poor-houses and placed them in self-supporting positions. In spite of all the industrial depression these men have continued to earn their livelihood.

At the Industrial Home for the Blind, Chicago, the population remains practically stationary. The advanced ages of the inmates have brought about conditions whereby only a small number in the home do any work, and the superintendent is of the opinion that a special home for aged blind will soon have to be provided. The broom factory has been reorganized and its production greatly increased.

SOLDIERS' HOME.

At the Soldiers' and Sailors' Home, Quincy, there has been but little change in the population notwithstanding the many conjectures

that have been made as to what might become of the home in a few years time. Soldiers and their wives continue to ask for admittance to the home. About 60 per cent of those admitted are hospital cases.

SOLDIERS' WIDOWS' HOME.

There is little change in the population of the Soldiers' Widows' Home at Wilmington. The average age of the old ladies is 75 years.

SOLDIERS' ORPHANS' HOME.

The Soldiers' Orphans' Home, Normal, where many dependent children are cared for, has made an enviable record during the past year. One hundred and forty-one children have been placed in family homes; 8 boys and 20 girls replaced; 13 boys and 13 girls returned to the home have not been placed, and 5 boys and 5 girls were placed at other institutions where they were more properly classified. Some of the children have been working outside of the home and during the 18 months of this arrangement, the net sum of \$1,054 was saved from the gross earnings during that period, which was \$4,098. Seven children placed in family homes attend high school in six different cities of the State. The school of the home is supervised by the State Normal University.

JOLIET PENITENTIARY.

The Warden of the Illinois State Penitentiary at Joliet says, "The wave of crime which manifested itself following the war, coupled with the concerted drive by all the city courts of Chicago last winter and spring, resulted in sending to the penitentiary an unusually large number of most desperate criminals. A total of 118 prisoners sentenced from ten years to life were received. During the last two years there has been an increased number of long term definite sentence prisoners. Last year 34 life timers were received; 2 for 35 years; 15 for 25 years; 6 for 20 years; 3 for 18 years; 5 for 15 years; 5 for 14 years and 2 for 10 years. Twenty-four were received with flat sentences of less than 10 years, besides a large number being committed under the indeterminate law with sentences ranging from one year to life."

NEW PENITENTIARY.

The new penitentiary at Stateville is nearing completion and 450 or more prisoners are now employed on the construction work. In a short time we hope to abandon the old penitentiary at Joliet and move all the prisoners to Stateville. Views of the buildings are shown elsewhere in this report.

WOMAN'S PRISON.

At the Woman's Prison there are 40 inmates, having an average age of 33 years, the oldest being 76 years and the youngest just 18. The average mental age is 12 years. The crimes for which they have been convicted are: Murder, 9; manslaughter, 5; sex crimes, 5; larceny,

8; robbery, 4; bigamy, 3; forgery, 2; burglary, 1; perjury, 1; receiving stolen property, 1, and confidence game, 1.

GIRLS' TRAINING SCHOOL.

There is a population of 417 at the Training School for Girls. Six hundred and seventy-nine girls are on parole, 238 working as domestics, 44 in factories, 51 doing clerical work, 8 telephone operators and 18 attending school.

VANDALIA FARM FOR MEN.

The law showing the object of the Illinois State Farm at Vandalia has been changed to allow prisoners from Joliet, Pontiac and Menard who are subject to parole, to be sent there before receiving their final parole. This institution is to be the last stepping stone from penal servitude to society. It now insures a large and useful institution for the State.

PROGRESSIVE MERIT SYSTEM.

The penal institutions report considerable progress in the installation and operation of the progressive merit system. It has proved to be an improvement over the haphazard method previously in vogue. The reformatory reports that the parole system merits high praise, considering that 85 per cent of the boys paroled make good law-abiding citizens.

NEW BUILDINGS AND PERMANENT IMPROVEMENTS.

The building projects and permanent improvements planned for welfare purposes under way and completed, including the new penitentiary at Stateville being erected by the Penitentiary Building Commission, for the year amount approximately to a total of \$7,968,000. Views of some of the buildings will be printed elsewhere in this report. Descriptive articles covering the principal buildings and improvements are as follows:

NEW HOSPITAL BUILDING AT ELGIN STATE HOSPITAL.

The new hospital now under construction and which will be completed shortly, has a frontage of 152 feet. The front portion is two stories in height and from the rear extend two one story wings, each 98 feet in length. The main portion of the building is divided into two portions and on each side of the dividing wall is a corridor. Going into the building, one enters the lobby which connects with a waiting room. Adjacent to the waiting room are offices for the examination and treatment of patients. These offices consist of a minor surgical and dressing room, physician's office, eye, ear, nose and throat room, an X-ray room and the dental office. To the right of the lobby are locker rooms for both nurses and physicians, the pharmacy and the clinical laboratory. This part of the building is to be used for the examination and treatment

of patients exclusively and will be equipped with the most modern apparatus. Contracts have already been let for this equipment and when installed it will equal that of any general hospital. To the rear of the dividing wall are wards for the care of patients, a diet kitchen, dining rooms and the head nurse's office. Each of the wards on the first floor accommodates 26 patients. The ceiling is high and the ventilation has been provided for in a most complete manner. On the second floor of the main part of the building are to be found the operating room and sterilizing room, as well as ward and single rooms for the care of patients and employees. Facing the front part of the second story will be found nine single rooms, which are to be equipped for sick employees.

One feature which is specially important is the provision for two dormitories for the isolation of contagious cases. These dormitories are so arranged that complete isolation is possible and the patients suffering from contagious diseases will in no way come in contact with any other patient or any other part of the building. These dormitories are provided with their own toilet and bath rooms, making the isolation quite complete.

HOME FOR WORLD WAR VETERANS AT THE ELGIN STATE HOSPITAL.

The Fifty-second General Assembly appropriated \$300,000 for the erection of buildings and equipment to care for additional patients at the State hospitals for the insane and as there were approximately 300 World War veterans among these patients, it was thought advisable, first, to erect a building for their care at Elgin. This is now nearing completion. It will accommodate 208 patients.

The building under construction and its equipment will cost approximately \$150,000. The rough design and layout for the building was planned by the Director of Public Welfare and later on amplified by the Supervising Architect. It is a plain one story bungalow style building. The first work on it began June 1, and now (December 1, 1921), it is almost completed. Patients of the Elgin State Hospital furnished the common labor, and at times as many as 150 men were employed on the work. They did the excavating, made the concrete blocks, attended masons and unloaded material. Fifty thousand concrete blocks and 2,000 feet of concrete water table were made by these patients. The low construction cost is due to the free patient labor and to the material furnished from the sand and gravel pits owned and operated by the Elgin State Hospital. Eight government trucks were used in hauling the material to the building site. All work with the exception of the slate roof, mill wood work finishing, tunnel, guttering for down spouts, and possibly some other classes of concrete work has been done by patient labor. All of the steam, plumbing and electrical work will be installed by hospital labor.

The main building faces east, has a frontage of 273 feet and all around the building the measurement is over 2,000 feet. The building contains dormitories, dining rooms, serving rooms, day rooms, toilets, shower and tub baths, wash rooms, linen rooms, clothing rooms and mending rooms, and on the outside of the building will be a court which will provide an abundance of sunshine and air. There will be small wards arranged for 5 or 6 patients who are physically ill and a private entrance for relatives is provided for use in visiting those who are under medical care. The building will be arranged so that relatives can visit these wards without coming in contact with other cases. The buildings are also arranged so that this unit is almost a separate institution as the war veterans can receive complete care under one roof without visiting other parts of the institution. The window work and the glazing has been done by patient labor under the supervision of the institution employees.

When completed, the cost per bed including equipment, will be in the neighborhood of \$700 which in these times is considered a very low construction cost. The building will be ready for use by early spring.

NEW BUILDINGS AT THE ILLINOIS STATE REFORMATORY.

Industrial Building, 50 feet by 310 feet, constructed of reinforced concrete faced with cement blocks on the outside, with steel sash, has been completed. The cement blocks were made by inmates of the reformatory and all of the construction work was also done by the boys. The building is equipped with the supervising architect's roof lighting system. It is semi-fireproof, having only four wooden doors. Material cost only \$5,000, not including boy labor.

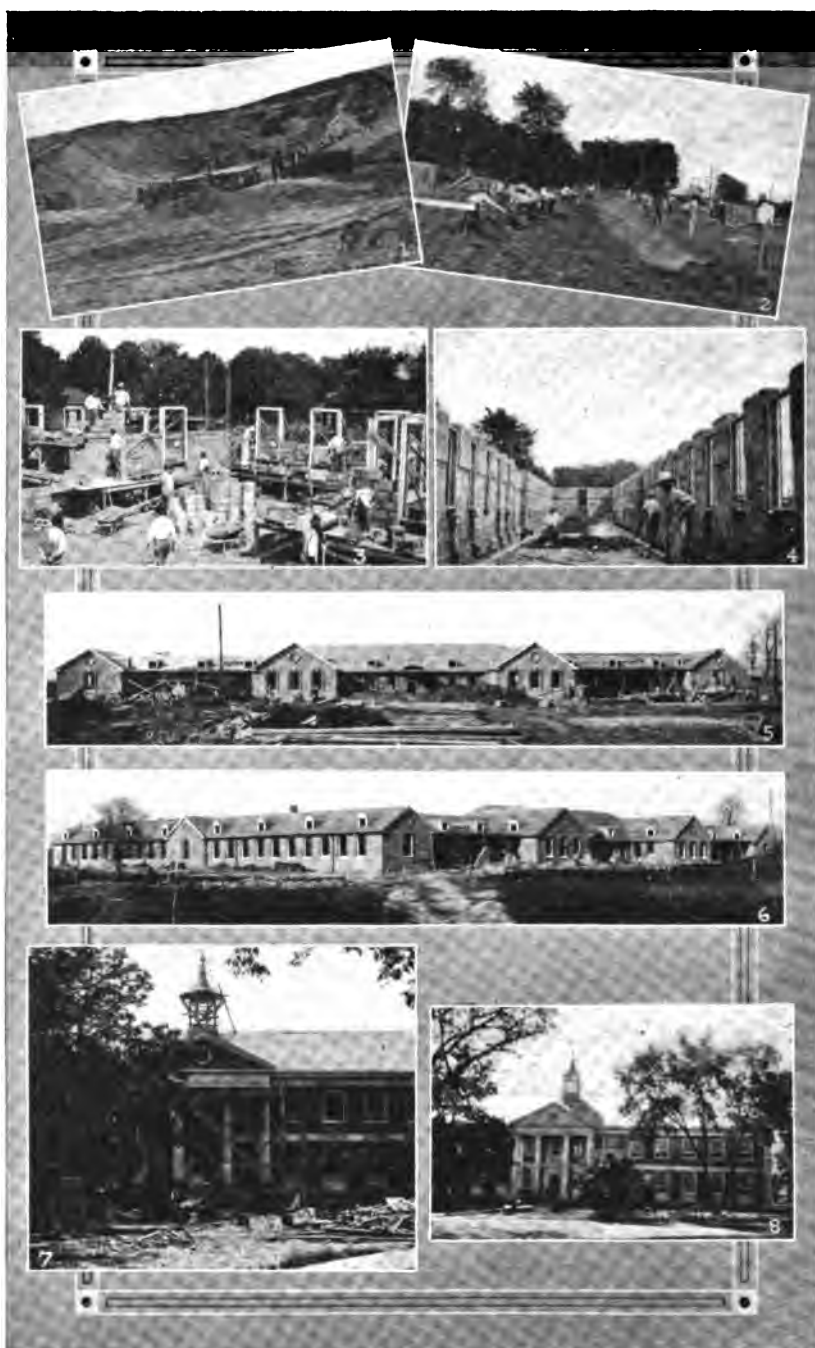
The Storage Room Building has been erected by boy labor at a cost of \$10,000 for the material. This building is 50 feet by 110 feet, and is built of concrete blocks, faced on the outside with brick, and has a concrete roof.

A cow barn, 50 feet by 170 feet, has been finished at a cost for the material of about \$9,000. All of the cement blocks were made at the institution and the labor on the building was furnished by inmates of the reformatory. This building is considered modern in every respect.

A new ice house was completed at a nominal cost; the work being done by inmate labor.

NEW BUILDINGS AT THE ANNA STATE HOSPITAL.

A beautiful nurses' home has been finished for this hospital at a cost of \$90,000. It is built of cloister brick, is two stories in height and has a cement roof. It is of fireproof construction throughout being of reinforced concrete. It has 50 rooms and is provided with a roof garden and large storage room in the attic.



NEW BUILDINGS AT ELGIN STATE HOSPITAL.

1—Gravel and sand pit belonging to State hospital; 2—Breaking ground for World War Veterans' Home; 3—Construction work—Veterans' Home; 4—South wing, Veterans' Home; 5—Veterans' Home—partial completion; 6—Veterans' Home nearly completed; 7—Hospital Building partially completed; 8—Hospital Building completed.

NEW BUILDINGS AT THE ALTON STATE HOSPITAL.

At a cost of approximately \$500,000 the following new buildings are being erected at this hospital: One hospital for men and women; one infirmary for men; two cottages for men and two for women and two extensive additions to the general kitchen for dining room purposes. It is expected that these buildings will be under roof before winter and that next year this institution's population will be practically doubled.

NEW BUILDINGS AT THE WATERTOWN STATE HOSPITAL.

A new Kitchen and Bakery Building at the Watertown State Hospital, East Moline, has been completed. Work began on the building April 1 and the structure was completed by June 22, at a cost of \$40,560. It is of one-story construction, of pressed brick and reinforced concrete, and is provided with the supervising architect's roof lighting system. The building is 50 feet wide by 104 feet long. The windows on each side and skylight in the roof are all operated on one shaft. There is an abundance of light and ventilation in this building. It is provided with a refrigerator, has shower baths for the cooks, toilet rooms for both sexes, store room in the center, vegetable storage room in the basement, and in the rear of the main floor there is a vegetable preparing room. The interior is glazed pressed brick and the building has a terrazzo floor.

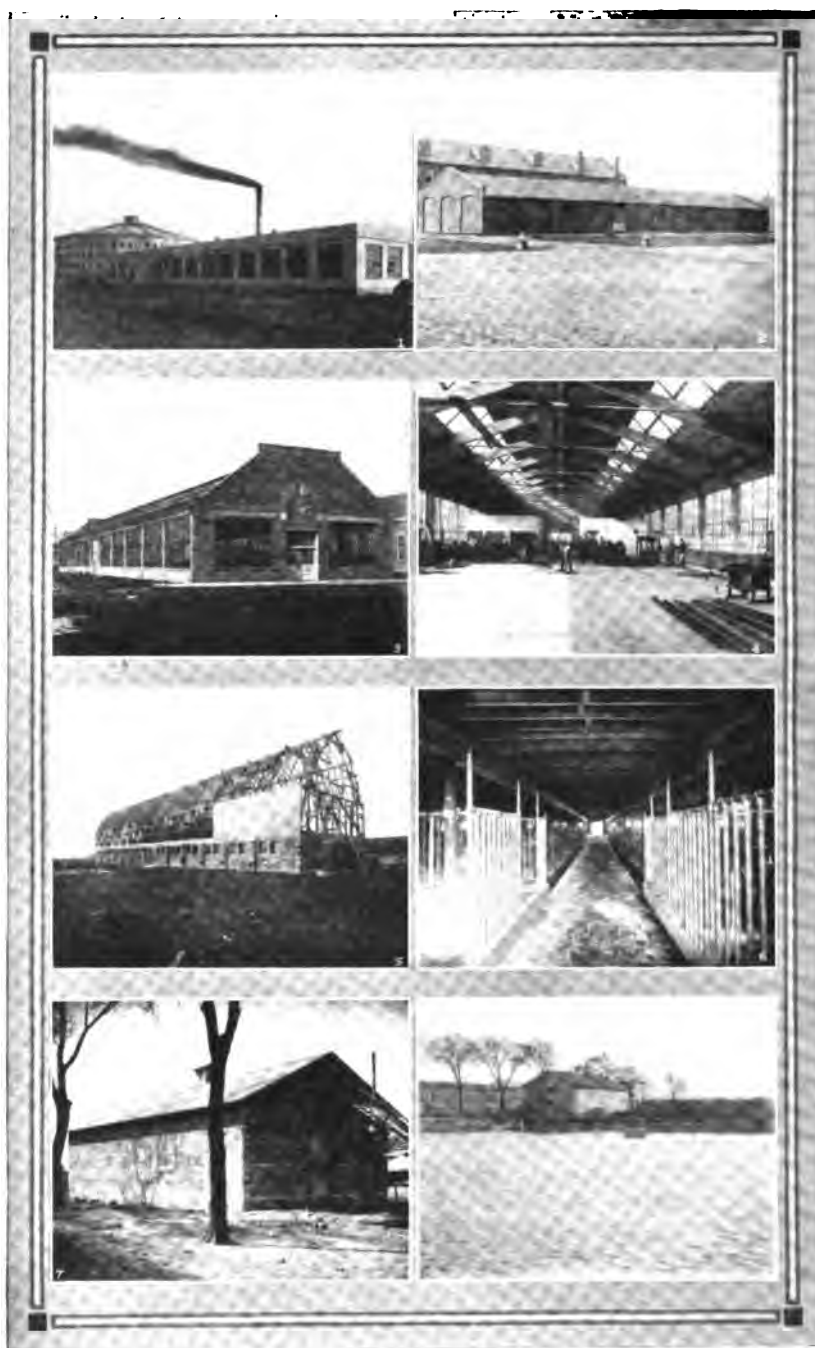
NEW COTTAGE AT THE SOLDIERS' ORPHANS' HOME, NORMAL.

This cottage completes a row of six, five of which are now occupied by the girl inmates of the institution. All of these cottages are of attractive design and similar in construction. The new one varies slightly in the interior arrangement and is also somewhat larger than the others and will accommodate 38 girls.

It is a two-story building of brick and frame construction, the first story being of red cloister brick, trimmed with cut stone. The second story is of frame construction painted white. The roof is of green tinted slate composition shingles.

It faces north with front entrance near the north end of the building on the west side. This entrance has columns on each side with small gable overhead and opens into a large living room on the first floor. On the north side of the room is a bay window. Near the center of the south side of this room is a cased opening leading into a hall and to a stairway leading to the second floor. On the west side of this hall is a locker room containing 38 lockers. Another door on the west side of the hall just south of door to locker room leads to the shower bath and adjoining are the lavatories and toilets. The floors in these rooms are of terrazzo.

Through a cased opening in the east side of this hall is seen the dining room. On the south side of the dining room is an entrance to the kitchen through the pantry which is provided with built-in table and



NEW BUILDINGS AT PENAL INSTITUTIONS.

1—Cell house and laundry, New Prison, Stateville; 2—Store house, State Reformatory, Pontiac; 3—Industrial Building, State Reformatory, Pontiac; 4—Industrial Building, State Reformatory, Pontiac; 5—Cow barn, State Reformatory, Pontiac; 6—Interior cow barn, State Reformatory, Pontiac; 7—Ice house, State Reformatory, Pontiac; 8—Pond and ice house, State Reformatory, Pontiac.

cupboards. The kitchen is supplied with a large sink with drain boards on each side. An additional small pantry with a liberal supply of shelf room also adjoins the kitchen. This room is cleverly arranged for convenience in the performance of household duties. A door on the west side of the kitchen opens into a hall which leads to a grade door on the south end of the cottage facing the girls' playground.

At the head of the stairway leading to the second floor is a door opening into the dormitory. This large, well lighted and ventilated room occupies about two-thirds of the entire second floor and is well supplied with windows on three sides.

The matron's room is entered through a door just to the right at the head of the stairs and occupies the southeast corner of the second floor. A private toilet and bath and a clothes room adjoin. Just across the hall from the matron's room, convenient to the dormitory is a door opening into a lavatory and toilet, linen and clothes closets.

A stairway from the hall on the second floor leads to the spacious attic which provides for storage of clothing and other personal effects not in daily use.

NEW SCHOOL BUILDING AT THE SOLDIERS' ORPHANS' HOME, NORMAL.

The new School Building is beautifully located near the center of the institution grounds. It is of the bungalow type, single story, brick and stone construction with slate roof. The cut stone trimming is in pleasing contrast to the reddish brown cloister brick. It is practically fireproof, with cement and mastic floors and partitions of gypsum block and hollow tile.

The main section of the building extends east and west about 176 feet with an east and west wing extending south from each end of the main section about 124 feet. The liberal allowance of the ground plan provides spacious corridors and commodious, well lighted class rooms. It would appear that artificial light will hardly ever be necessary in these rooms.

The plan of the building provides for extensions to the south of the east and west wings if the growth of the institution makes additional school facilities necessary. Facing the south the building is entered at the center through an ornamental arched loggia which leads to a vestibule and thence to the main corridor. The floors are of cement with mastic finish. The walls of the corridors are of salt glazed brick. The main corridor extends the entire length of the building east and west with a large window at each end and class rooms on each side. The corridors of the east and west wings connect with the main corridor and each wing has an entrance similar to the main central entrance. The corridors in the wings have class rooms on one side and artistic arched windows on the other.



NEW BUILDINGS AT CHARITABLE INSTITUTIONS.

1—Construction work at Alton State Hospital, north from Administration Building; 2—Construction work, Alton State Hospital—northeast from Men's Receiving Cottage; 3—New Building, Alton State Hospital; 4—Dining room addition to kitchen, Alton State Hospital; 5—Nurses Home, Anna State Hospital; 6—Employees' Building, St. Charles School for Boys; 7—Epileptic Colony, Dixon, east of Illinois Central tracks; 8—Cottage—Epileptic Colony.

The building provides ten commodious class rooms, each room having a connected room for coats, wraps, etc., a principal's office, teachers' rest room, janitor's room and boys' and girls' toilets. The class rooms are equipped with built-in blackboards. The seating arrangement is in accordance with the most recent approved ideas. The principal's office is located in the center of the main section of the building, convenient and accessible to all class rooms. The rest room provides a comfortable retiring room with toilet accommodations for the teachers. The boys' and girls' toilets are located near the connecting corridors of each wing of the building and are equipped with modern sanitary fixtures.

The school will be heated by steam and lighted with electricity. The ventilating system is operated with a large electric fan located about the center of the main attic. The electric wiring, steam and water pipes enter the building and are introduced into the various rooms through a concrete tunnel constructed under the floors and extending entirely around the building.

NEW PENITENTIARY BUILDINGS AT STATEVILLE.

The Penitentiary Commission is looking forward to a very active biennium for 1921-1923. The manner in which the building program for this period has started out, indicates a much more active period than ever before.

Work has already been commenced on Cell House "F," the third unit to be started, and revised plans and drawings are under way for Class Three housing group, Administration Building, Psychiatric and Classification Building, and General Hospital Building, from which revised designs, it is anticipated that the actual construction work will commence shortly.

Construction work in the completion of numerous other buildings such as the Cold Storage and Supply Warehouse, Kitchen, Bakery, Dining Hall, Power House, and Cell House "E" (the second cell house) is likewise in progress. The enclosing wall, being 6,750 feet long enclosing sixty-four acres, was completed last summer, and the five wall towers in connection therewith are now nearing completion.

Previous to the construction of the buildings mentioned above, Cell House "D" (first cell house) was built and has now been occupied for over two years. The Laundry and Bath Building which was completed coincident with Cell House "D" is temporarily in use as a kitchen and dining hall.

During all of the progress of construction on the above buildings, a tremendous amount of sanitary water supply, power transmission, temporary heating arrangements, and transportation facilities were constantly being worked on, on a large scale. A complete system of sanitary and storm sewers has been installed, together with a very

modern and comprehensive sewage disposal system operating on the Imhoff principle.

In addition to the above, the drainage of the site by the open joint tileage method has had almost continuous attention. Railroad facilities upon a large scale have been provided and are revised from time to time to meet the changing conditions as the construction proceeds.

Power transmission lines have been extended from the Power House of the Sanitary District and the distribution of such power through transformers, etc., has been made, from time to time, to the various points of demand. The water supply system above mentioned consists of two deep driven artesian wells with a hundred thousand gallon steel tower reservoir, and such pumping machinery as is necessary to store and distribute the water.

Among the more recent buildings under construction the Cold Storage and Supply Warehouse, which is practically completed and occupied in part, is approximately 150 feet by 200 feet, and will be used as a distribution center for all prison commodities except for the future industries, as well as the storage and distribution of food supplies. This building contains a modern cold storage plant with ice-making machinery.

The Power House is up to the roof with the boilers in place and the stack completed. This power unit will develop twelve hundred horse power equipped as at present. Provision is made in the design for a 50 per cent increase of boiler capacity. When the generators are installed, this unit will take care of all power, light, and heat for the entire institution; the exhaust steam being utilized for the heat and operation of the ice machinery. The plant has a capacity sufficient to take care of all future industries and such demands as may be found necessary for the building groups outside the walls.

The foundations are in for the Dining Hall, Kitchen, and Bakery group. The Dining Hall will seat the entire population at one time and will have the most modern equipment for serving. A cafeteria type of service with portable steam tables will be used with a separate entrance for each cell house so that the entire population can be served and seated in about five minutes. The kitchen is provided with steam and electric cooking equipment. The bakery will be equipped with electric ovens.

Cell House "E," which is similar to Cell House "D," the first cell house, and contains 248 cells, is complete except for the installation of the plumbing fixtures and locking device and will be ready for occupancy in the early part of 1922.

The Special Cell House, which contains twenty cells for solitary confinement, was completed in the summer of 1921.

NEW BUILDINGS AT THE DIXON STATE HOSPITAL, FOR THE EPILEPTIC HOSPITAL.

The four new buildings for the epileptics now housed in the buildings west of the Illinois Central Railroad are nearing completion. They will accommodate 120 patients. These buildings consist of one dining room and three buildings with dormitories and day room. At the present time, 121 patients are cared for in the old buildings, which will eventually be used for the feeble-minded. The buildings are one story. It is believed that they are the last word in institution architecture.

FOR THE FEEBLE-MINDED COLONY.

In addition to the buildings already constructed for the use of epileptics and which are eventually to be used for the feeble-minded, there are five additional new buildings under construction, one receiving cottage, three patients' cottages, with dormitories and day rooms which lack plastering and trimming, and one tubercular hospital which is only partly completed. Excavation is also under way for two new cottages.

When the new buildings are all completed, there will be additional capacity for 500 patients. All the work on these buildings, with the exception of the excavation, has been done by contract. One hundred thousand cement blocks were made by patient labor.

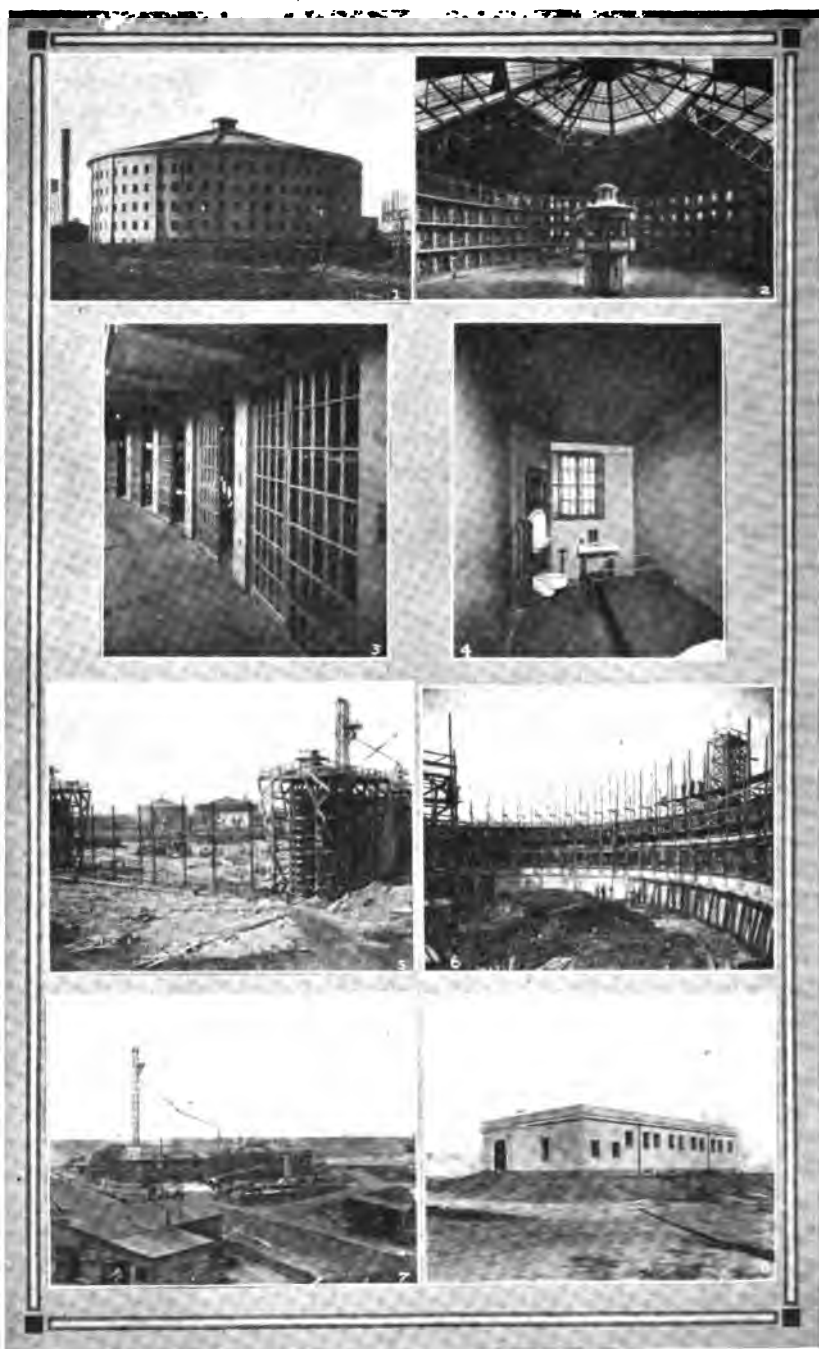
INSTITUTION POPULATION.

At the present time there are 426 inmates of the Dixon State Hospital. Of this number, 121 are epileptics, 216 feeble-minded and 90 insane.

RESEARCH AND EDUCATIONAL HOSPITALS, CHICAGO.

The following description of the buildings, in part, was prepared by Mr. Edgar Martin, Supervising Architect of the State of Illinois:

"The American visitor at Oxford and Cambridge has often commented upon the atmosphere of peace and quiet which pervades the quadrangles of the old English colleges. If he be of a receptive mind, he will doubtless have felt a desire to play truant from the exacting itinerary of his Cook's tour and to linger on for a time in one of these cloistered courts with its ivy-covered walls and smooth expanse of greensward. It was with a desire to secure something of this atmosphere of sheltered seclusion as an environment for sick and convalescent patients that a free adaptation of English collegiate gothic was chosen for the buildings of the new Research and Educational Hospitals now being constructed in Chicago for the State of Illinois. Located in a somewhat congested and none too attractive district of the city—a situation having very positive advantages as an assured source of clinical material—the hospital has exercised the privilege of turning its back, as it were, upon its surroundings and making its own beauty within its domain. Those who have directed this project believe that they have



NEW PENITENTIARY BUILDINGS, STATEVILLE.

1—Circular cell house; 2—Interior circular cell house; 3—Cell doors; 4—Interior of cell; 5—Construction of wall surrounding penitentiary; 6—Construction additional circular cell house; 7—Construction scene; 8—"The Solitary."

made no mistake in emphasizing the element of attractive surroundings; there is a growing conviction that our American hospitals have to some extent overlooked the therapeutic effect of beauty and have at times become forbidding in seeking to satisfy the demands of sanitation and cleanliness.

"The various buildings of the hospital are grouped around the perimeter of the site, enclosing a number of medium sized courts and a large central quadrangle. In general, the rooms for the patients are on the sides towards the courts and quadrangle, while the less quiet and attractive frontage is devoted to hospital utilities, ward examination rooms and laboratories. The courts and quadrangles will eventually receive such planting and landscape treatment as will make them a pleasant recreation space for convalescent patients and an attractive outlook from the wards.

"The site, 556 feet by 800 feet, comprises about ten acres. The portion of the main building now under construction is set back from Polk Street about 200 feet; this is to reserve space at the north end of the site for future buildings, * * * which will be devoted to laboratories, libraries, and class rooms, with the maximum possible north light. * * * In the main building the east portion will be devoted to the Clinical Institute of the College of Medicine, with wards for general medicine, general surgery, obstetrics, gynecology and pediatrics. * * * The Psychiatric Institute for the treatment and study of mental diseases will occupy one wing. The initial portion of the Orthopedic Institute, where the particular requirements necessitate a building of the ward pavilion type * * * is adjoining. * * * The strategic center of the group will be the future central administration building, which, together with the portion now under construction connecting it with the main building will be limited to one story in height, so as to maintain an open southern exposure for the wards of the main buildings; its roof will form a promenade at the level of the second floor wards.

"The buildings in general will be three stories in height, with a basement pipe space, and a fourth story occupying the lower portion of the space enclosed by the pitch roof; an interesting structural device by which the roof load is carried on inclined struts resembling flying buttresses, with a curtain wall set back about eight feet from the building line, permits the development of this fourth floor or roof story as space with light and air equal to those of the floors below.

"Communication over the entire area is assured by a system of corridors slightly below the level of the basement pipe space. In general, these corridors will be against the outside walls, through which ample light and air is obtained, the first floor being five feet above the outside grade makes it possible to secure corridor windows above grade, without areas. The connection between adjoining buildings becomes a double



NEW BUILDINGS AT STATE HOSPITAL FOR EPILEPTICS AND COLONY FOR FEEBLE-MINDED, DIXON.

1—Front view; 2—Administration Building to right, Receiving Building to left; 3—East from Administration Building; 4—Buildings in course of construction, northeast of Administration Building; 5—New building construction; 6—Building construction work east of Administration Building; 7—Store house and refrigerator.

corridor with a separate passage through which pipes may be carried from one basement pipe space to another. All interdepartmental communication, passage of visitors, transmission of food, laundry and supplies will be through the communicating corridor system, thus insuring ward privacy and a minimum of interference. * * *

"The ambulance court makes it possible to secure well lighted ground floor rooms around its four sides, * * *.

"The out-patient department will function in most cases as the receiving department of the hospital. From the great mass of human clinical material passing through it, will be chosen the selective cases to be transferred to the wards for future study and treatment. There will be a small receiving department at the ambulance entrance but its use will be largely restricted to ambulance cases and down State patients arriving by train at hours when the dispensary is closed. This importance of the dispensary as a source of supply for clinical material has led to special emphasis being placed upon its quarters. It will occupy the entire first floor of the initial portion of the main building, with the possibility for expansion into adjoining portions to be built later. The general clinics will occupy the east half of the building, the eye and ear clinics the west half, and the psychiatric and orthopedic clinics the east and west halves of the psychiatric wing. The general waiting room is so arranged as to keep the streams of arriving and departing patients separated and to effect a rapid distribution of arriving patients to the proper desks and ultimately to the various clinics. Elevators furnish convenient access to the X-ray department on the second floor and to the hydrotherapy and electrotherapy departments on the basement level. A small lecture room seating about one hundred will be available for lectures and demonstration talks to out-patients as well as for use by students and nurses.

"The second and third floors form the principal ward floors. The wards are kept small to satisfy the clinicians' desire for a unit best adapted to teaching purposes; a ward of four beds was established as the desirable size and the required floor area of 320 square feet led to the choice of a bay 16 feet wide and 20 feet deep as the typical unit for the entire scheme. * * * In the psychiatric wing, the distribution of patients into reception, quiet and disturbed wards has determined the plan layout, as is apparent upon inspection; the second floor is assigned to male patients and the third floor, with an identical arrangement, to female patients. Elevators furnish access to the hydrotherapy department on the basement level, and to a large solarium for recreation and occupational therapy, together with ample roof recreation space, at the level of the fourth floor.

"The operating department, of a size adequate for the entire ultimate development of the group, occupies the central portion of the fourth floor. It comprises six operating rooms with side and top light



combined, two smaller operating rooms with side light only, and the requisite utilities. Students' amphitheaters seating from sixteen to forty students each are provided for the six main rooms, access to these is by stairs descending from a corridor on the floor above, thus aiding in keeping the operating corridor free from unnecessary traffic.

"In the eastern portion of the fourth floor are the wards for children and infants; in the western portion are day quarters for eye and ear patients, a large proportion of whom are ambulatory, and a small ward unit. In the psychiatric portion of this floor are research and demonstration rooms and two internes' rooms for the psychiatric staff.

"On the fifth floor is a ward unit for obstetrics and gynecology, and on the sixth or top floor are quarters for the resident physicians. Internes for the present will be housed in temporary quarters on the third floor of the main building, in space that will ultimately be devoted to libraries and laboratories.

"The future laboratories, libraries and class room in the portions to be built upon the Polk Street frontage will have direct access at each floor to the hospital portions so that the basic idea of the institution, the close association of the patient with the research physician and investigative worker, may be most closely realized.

"In the Orthopedic Institute, the requirements for long duration care and treatment for the greatest possible number of patients made a ward pavilion type of plan advisable. The south wards are for girls and the north wards for boys; on the first floor are wards for ambulatory patients, day rooms, and dining rooms. It may be noted here that the grade of the central quadrangle is raised to a point almost level with the first floor, so that wheeled chairs may pass out into the area easily and comfortably. On the second floor are wards for bed patients. The third floor is devoted to first and second observation wards, both for girls and boys, and a nursery ward. The central and southern portions of the fourth floor contain study and class rooms for manual training and other forms of occupational instruction, as well as instruction in the ordinary grammar school subjects. Here also is a large kindergarten and play room, with a small stage where moving pictures may be shown and theatrical performances given by the children. All of these rooms open by French windows on open balconies and roofs so that the therapeutic possibilities of fresh air and sunshine may be most fully realized.

"In the northern portion of this floor are located three isolation wards, where children who have contracted contagious diseases may be temporarily isolated and at the same time continue their orthopedic treatment. Each ward has its own serving pantry and combined utility, toilet and bath room. Separate entrances for nurses and doctors, with adequate facilities for the prevention of cross infection are provided.

"The construction of the buildings throughout will be of the most permanent and substantial character, with a view to the maximum ultimate economy in maintenance charges. The windows are steel casements hung in steel frames, with ventilating transoms above; they are of a size to furnish the average ward from 15 per cent to 20 per cent glass area to floor area. The walls are laid up in a wire cut Illinois brick, which presents sufficient variety in color and texture to approximate the charming weathered effect of old English brick work. Bases, string courses, copings and window trim are of Indiana limestone. The roof covering is a fire flashed interlocking shingle tile with predominating tints of purple and russet brown. Ornamentation has been introduced sparingly and with discrimination, the greater reliance for effect being placed upon proportion of parts and dignity of material.

"Both in outward appearance and in the construction of 'each minute and unseen part,' those who have directed this undertaking have endeavored to make the building a worthy outward expression of the idea behind them—the desire of the State of Illinois to use its vast resources for the moral and physical betterment of its people."

AMUSEMENTS.

The amusements in all of the State institutions are important factors for the happiness and contentment of both inmates and employees. Motion picture shows are given in most all of the institutions. Other recreations, baseball, horseshoe pitching and theatricals are indulged in. Some institutions have splendid bands composed of inmates. At one institution they have community singing with a patient band of 15 pieces under the direction of a sightless student from the Illinois School for the Blind.

Some of the institutions have been furnished voluntary local talent gratis for the amusement of the patients. If this is advocated in other institutions and communities it might result in a great benefit to the institutions. Several high class vaudeville acts from the city of Chicago have been given free to the patients in the daytime at the hospital at Dunning.

INSTITUTION LIBRARIES.

In some of our State institutions the needs of the library are urgent, the books are fast becoming worn out, are going into disuse and should be replaced with modern literature. It is urged that the next General Assembly make a liberal allowance in the budget for the institution libraries.

MEDICAL SERVICE.

Although there has been a shortage in the number of physicians in attendance at the State institutions, considerable progress has been made with the means at hand, in the care and treatment of the patients.



NEW BUILDINGS AT STATE INSTITUTIONS.

1—School Building, Soldiers' Orphans' Home; 2—Cottage, Soldiers' Orphans' Home; 3—Research and Educational Hospitals, Chicago—north view; 4—Research and Educational Hospitals, Chicago—south view; 5—Exterior of New Kitchen and Bakery Building, Watertown State Hospital, East Moline; 6—Interior of Kitchen and Bakery Building, Watertown State Hospital.

"Prevention of insanity" should be the slogan in all our State institutions. There should be some practical methods for prevention presented in the different communities of the State. As one managing officer describes it, "Insanity is an end-product" and for that reason it is important that opportunity be afforded these people for medical treatment before they become patients in the State hospitals. Scientific knowledge from our State laboratories should be disseminated to the people through the social service workers to community clinics. Two of our State hospitals have organized clinics and patients on parole living in the vicinity of the towns where these clinics are located, report in order that the physician in charge will be able to examine and interview them as to their adjustment outside of the hospital. These clinics do not furnish treatment.

TRAVELING SURGEON.

The traveling institution surgeon reports a successful year in his work at the institutions, and your attention is invited to his report printed herewith.

NURSING SERVICE.

The nursing service at State institutions is gradually overcoming the handicap occasioned by the World War, and we look forward to increased efficiency for the future. The hospitals for insane report that the interest in the schools for nurses is increasing. On account of some qualifications formerly required of applicants, we have lacked students in these schools, but these have been removed and the schools are better attended.

DENTISTS.

The dentists of the State institutions have been carefully doing work for the patients and this has greatly added to their health and comfort.

EYE AND EAR INFIRMARY.

The Eye and Ear Infirmary has cooperated with the other institutions of the State in treating patients and some of the institutions have specialists who look after this work in the institution. The interior of buildings has been completely painted and cleaned and the whole institution has been rehabilitated. The staff at the Eye and Ear Infirmary has recently been reorganized with Dr. William L. Noble of Chicago as chief of the medical staff.

INSTITUTE FOR JUVENILE RESEARCH.

Particular attention is invited to the charts and reports of the criminologist who has charge of the Institute for Juvenile Research and the Psychopathic Institute in charge of the State alienist. The criminologist and his staff have done considerable work at the penitentiaries,

reformatory, St. Charles, Geneva and Orphans' Home at Bloomington in classifying the inmates, and has made a survey of subnormal children in some of the schools of the State. He has also made mental tests of infants at the State Fair and various baby health conferences in the State. A psychiatric survey of the penal institutions to determine types of criminals has also been made. The Managing Officer of the St. Charles School for Boys recommends that a psychologist be employed to classify the lads of the school. I heartily endorse his recommendation. He also recommends that two additional home visitors be employed as there are 1,055 boys now on parole with only three home visitors to look after them and I also concur in this recommendation.

WORLD WAR VETERANS.

The last General Assembly passed an act amending the law with reference to the admittance of veterans to the Illinois Soldiers' and Sailors' Home, Quincy. This act provides that those who served in the War of the Rebellion, the Spanish-American War, the Philippine Insurrection, the Boxer uprising in China and the World War are entitled to admission to the home.

Elsewhere in this report are shown pictures of the new building being erected at Elgin for the patients who are ex-service men. We are now furnishing vocational training for these men. The courses consist of arithmetic, geography, typewriting, bookkeeping, business English, penmanship, spelling, history, mechanical drawing, commercial art, metal work, auto mechanics and wood working. The Federal Government furnishes all the equipment and instructors. The War Risk Bureau pays the State of Illinois \$1.00 per day for the care of each patient.

OCCUPATIONAL THERAPY.

The hospitals for insane have made considerable advancement in occupational therapy and physical culture during the past year. This has brought about habit training and neatness among the patients. It is making the patients more contented and has made a decided improvement in their health. Furthermore, many of the articles manufactured such as furniture, rugs and clothing are useful in the institution and lessen the expenditures for such articles.

SCHOOL FOR THE DEAF.

At the School for the Deaf, Jacksonville, the social service worker has done some work in locating children to be sent to the school. The institution head believes that wider publicity would locate additional pupils, and that this feature should be taken up with school teachers and county school superintendents.

FARM GARDEN AND DAIRY CONSULTANT.

Has visited all the farms and gardens of the State several times and advised with head farmer and gardener in regard to work of their respective departments. Dairying has been much handicapped by disease. One thousand three hundred and eighty-five head of cattle were tested and 365 condemned, which were killed, and now the herds are all free from tuberculosis. The farm consultant purchased 234 dairy cattle during the year. The herds most affected were Elgin, Lincoln, Peoria, St. Charles and Watertown. He has endeavored to bring about an interchange of products between institutions. It is noteworthy that the gardener at the Chicago State Hospital has been able to produce enough garden truck to supply the institution a ton of green vegetables each day. I refer particularly to his report appearing elsewhere in this volume.

PARDONS AND PAROLES.

Illinois takes the front rank in the after-care of its wards paroled from the penal, reformatory and correctional institutions. This work is looked after by parole agents from the Division of Pardons and Paroles. The institutions from which these wards are paroled are: Illinois State Penitentiary, Joliet; Southern Illinois Penitentiary, Menard; Illinois State Reformatory, Pontiac; State Training School for Girls, Geneva, and the St. Charles School for Boys at St. Charles. Elsewhere in this report will be found the report of the Superintendent of the Pardons and Paroles Division, covering the work of that division during the last year. The enlarged population of these institutions and the assuming of supervision of parolees from the boys' and girls' schools at St. Charles and Geneva has greatly added to the work of the division. In this report will be found statistics bearing on the population of the penal institutions and also upon the applications for pardon and commutation of sentences, and parole orders and cases acted upon by the division during the year.

With the completion of the permanent buildings at the Illinois State Farm, Vandalia, where men subject to parole can be properly trained and fitted to return to society, the crowded condition of our penal institutions will be greatly relieved, and, with this new institution, the State, through its Division of Pardons and Paroles, will be able to do better and more effective work.

PRISON INDUSTRIES.

Prison industries suffered greatly on account of unfavorable markets and I respectfully call attention to the profit and loss statements appearing in the report of the fiscal supervisor.

SUPERVISOR OF DIETETICS.

The supervisor of dietetics has been visiting the institutions suggesting changes for better food and sanitation.



EXHIBITS AT PAGEANT OF PROGRESS AND ILLINOIS STATE FAIR.

1—Department of Public Welfare booth, Pageant of Progress, Municipal Pier, Chicago, showing mechanical restraint appliances formerly used; 2—Chicago State Hospital for Mental Diseases, Dunning—booth at Pageant of Progress, showing modern methods for care and treatment of insane; 3—Department of Public Welfare booth, Illinois State Fair, Springfield, with St. Charles School for Boys Band; 4—Department of Public Welfare booth, Illinois State Fair, showing mechanical restraint appliances formerly used; 5—Department of Public Welfare booth, Illinois State Fair, showing hydrotherapeutic baths and modern methods for care of insane.

PUBLIC EXHIBITS.

Exhibits were made this year at the Pageant of Progress at the Municipal Pier, Chicago, and the Illinois State Fair at Springfield, showing institution work. At both of these exhibits the old and new ways of caring for the insane were portrayed. Exhibits from the institutions were shown in several booths. At both exhibits, the St. Charles School for Boys band of 30 pieces furnished the music. Elsewhere will be found half-tone cuts showing views of the exhibits and the band.

COMMUNITY SERVICE.

Neighborly and helpful community service has been encouraged in many of the institutions. Buildings have been allowed for public meetings, and surgical demands both ambulatory and hospital have been furnished. At one institution a building was furnished for school, when the district school had been destroyed by fire.

FINANCES.

Detailed statement showing the financial affairs of the institutions will be found in the report of the fiscal supervisor printed in this report.

OFFICIAL APPOINTMENTS AND CHANGES.

Charles T. Hoblit of Jacksonville, appointed superintendent of Illinois State Farm, Vandalia, July 1, 1920.

Colonel J. W. Reig of Rock Island, appointed managing officer of Illinois Soldiers' and Sailors' Home, Quincy, September 1, 1920. vice Captain John M. Andrew, resigned.

Judge C. H. Jenkins of Springfield, assumed the office of Director of Public Welfare, January 19, 1921.

Otto A. Elliott of Springfield, appointed managing officer of the Illinois Charitable Eye and Ear Infirmary, Chicago, February 17, 1921, vice Dr. Hiram J. Smith, resigned.

D. S. McKinstry of Kankakee, appointed farm, garden and dairy consultant, March 10, 1921.

Ralph Spafford of Bloomington, appointed managing officer of the Illinois Soldiers' Orphans' Home, Normal, June 1, 1921, vice John W. Rodgers, resigned.

George A. Brown of Brownstown, appointed superintendent of the Illinois State Farm, Vandalia, July 16, 1921, vice Charles T. Hoblit.

Otto A. Elliott of Springfield, appointed managing officer of the Industrial Home for the Blind, Chicago, July 21, 1921, vice Howard O. Hilton, resigned. Lawrence H. Becherer was acting managing officer for a short period.

Dr. Leo Steiner of Chicago, appointed managing officer of the Illinois Charitable Eye and Ear Infirmary, Chicago, August 1, 1921, vice Otto A. Elliott, transferred.

A. D. Warner, 1142 East Forty-fifth Street, Chicago, appointed assistant superintendent of the Division of Pardons and Paroles, August 10, 1921.

Charles P. Hitch of Paris, appointed assistant superintendent of the Division of Pardons and Paroles, August 10, 1921.

Ira M. Lish of Saunemin, appointed general superintendent of the Illinois State Reformatory, Pontiac, September 1, 1921, vice J. F. Scouller, resigned.

Mrs. Lucy D. Ball of Carmi, appointed assistant superintendent of charities, September 1, 1921.

Roy W. Ide of Springfield, appointed manager of sales, institution industries, September 1, 1921.

Dr. William L. Noble of Chicago, appointed chief of staff, Illinois Charitable Eye and Ear Infirmary, Chicago, September 1, 1921.

Mrs. Lucy D. Ball of Carmi, appointed acting managing officer of the State Training School for Girls, Geneva, September 14, 1921, vice Dr. Clara E. Hayes, resigned.

Dr. J. H. Ellingsworth of East Moline, appointed managing officer of the Watertown State Hospital, East Moline, September 15, 1921, vice Dr. M. C. Hawley, resigned.

Edward P. Petri of Belleville, appointed warden Southern Illinois Penitentiary, Menard, September 15, 1921, vice James A. White, resigned.

John L. Whitman of Chicago, appointed acting warden Southern Illinois Penitentiary, Menard, September 15, 1921, to act until Mr. Petri reports for duty.

Dr. W. A. Stoker of Centralia, appointed managing officer of the Kankakee State Hospital, Kankakee, September 15, 1921, vice Dr. Eugene Cohn, resigned.

Lawrence H. Becherer of Kankakee, commissioned by the Governor as superintendent of charities, September 20, 1921, vice A. L. Bowen, resigned.

Dr. Charles F. Read of Chicago, commissioned by the Governor as alienist, September 29, 1921, vice Dr. H. Douglas Singer, resigned.

Dr. Charles F. Read of Chicago, alienist, placed in charge of the State Psychopathic Institute, Chicago, October 1, 1921, vice Dr. H. Douglas Singer, resigned.

Dr. Daniel D. Coffey of Chicago, appointed managing officer of the Chicago State Hospital, Dunning, October 1, 1921, vice Dr. Charles F. Read, appointed alienist.

Mrs. C. Elinor Rulien of Joliet, appointed superintendent of the Woman's Prison, Joliet, October 15, 1921, vice Miss Grace Fuller, resigned.

Victor McBroom of Kankakee, appointed supervisor of dietetics, October 15, 1921.

Colonel O. C. Smith of Benton, appointed managing officer of the Illinois School for the Deaf, Jacksonville, October 20, 1921, vice H. T. White, resigned.

Dr. George A. Zeller of Peoria, transferred as managing officer of the Alton State Hospital, Alton, to the Peoria State Hospital, Peoria, November 15, 1921, vice Dr. R. A. Goodner, resigned.

Dr. C. E. Trovillion of Metropolis, appointed managing officer of the Alton State Hospital, Alton, November 15, 1921, vice Dr. George A. Zeller, transferred to Peoria State Hospital.

Mrs. Lucy D. Ball of Carmi, appointed permanent managing officer of the State Training School for Girls, Geneva, November 16, 1921.

ACKNOWLEDGMENTS.

In conclusion I desire to extend my grateful acknowledgment and sincere thanks to the officers and employees of the department, divisions and institutions for their loyal support during the period I have been connected with the State service.

REPORT OF SUPERINTENDENT OF PRISONS.

JOHN L. WHITMAN, *Superintendent.*

Achievements in construction work at the new prison during the year give reasonable opportunity for consideration of the possibility of vacating the old prison in Joliet in the not distant future.

The Penitentiary Building Commission is looking forward to a very active biennium for 1921-1923. The manner in which the building program for this period has started out, indicates a much more active period than ever before.

Work has already been commenced on Cell House "F," the third unit to be started, and revised plans and as drawings are under way for the Class Three housing group, Administration Building, Psychiatric and Classification Building, and General Hospital Building, it is anticipated that the actual construction work will shortly commence.

Construction work on numerous other buildings such as the Cold Storage and Supply Warehouse, Kitchen, Bakery, Dining Hall, Power House, and Cell House "E" (the second cell house) is likewise being completed. The enclosing wall, being 6,750 feet long enclosing sixty-four acres, was completed last summer, and the five wall towers in connection therewith are now nearing completion.

Previous to the construction of the buildings mentioned above, Cell House "D" (first cell house) was built and has now been occupied for over two years. The Laundry and Bath Building, which was completed coincident with Cell House "D," is temporarily in use as a kitchen and dining hall.

During all of the progress of construction on the above buildings, a tremendous amount of sanitary water supply, power transmission, temporary heating arrangements, and transportation facilities were constantly being worked on, on a large scale. A complete system of sanitary and storm sewers has been installed, together with a very modern and comprehensive sewage disposal system operating on the Imhoff principle.

In addition to the above, the drainage of the site by the open joint tileage method has had almost continuous attention. Railroad facilities upon a large scale have been provided and are revised from time to time to meet the changing conditions as the construction proceeds.

Power transmission lines have been extended from the power house of the Sanitary District and the distribution of such power through transformers, etc., has been made, from time to time, to the various

points of demand. The water supply system above mentioned consists of two deep driven artesian wells with a hundred thousand gallon steel tower reservoir, and such pumping machinery as is necessary to store and distribute the water.

Among the more recent buildings under construction, the Cold Storage and Supply Warehouse, which is practically completed and occupied in part, is approximately 150 feet by 200 feet, and will be used as a distribution center for all prison commodities except for the future industries, as well as the storage and distribution of food supplies. This building contains a modern cold storage plant with ice-making machinery.

The Power House is up to roof with the boilers in place and the stack completed. This power unit will develop twelve hundred horse power equipped as at present. Provision is made in the design for a 50 per cent increase of boiler capacity. When the generators are installed, this unit will take care of all power, light and heat for the entire institution; the exhaust steam being utilized for the heat and operation of the ice machinery. The plant has a capacity sufficient to take care of all future industries and such demands as may be found necessary for the building groups outside the walls.

The foundations are in for the Dining Hall, Kitchen and Bakery Group. The dining hall will seat the entire population at one time and will have the most modern equipment for serving. A cafeteria type of service with portable steam tables will be used with a separate entrance for each cell house so that the entire population can be served and seated in about five minutes. The kitchen is provided with steam and electric cooking equipment. The bakery will be equipped with electric ovens.

Cell House "E" which is similar to Cell House "D," the first cell house, and contains 248 cells, is complete except for the installation of the plumbing fixtures and locking device and will be ready for occupancy in the early part of 1922.

The special cell house, which contains twenty cells for solitary confinement, was completed in the summer of 1921.

The program that has been carried out, as will be observed, brings about the completion of underground work which permits of construction of buildings, which can be made to serve the purpose for which they are built at once, as connection with drainage, water mains, etc., can be made without delay in the future.

Up to this time a very large percentage of inmates employed on construction work have been assigned to work upon the construction of the wall, which is now complete. Hereafter all will be assigned to the construction of buildings, which will go to complete the entire group provided for in the original plans.

ILLINOIS STATE FARM AT VANDALIA.

The last legislature amended the original act creating a State Farm, as follows:

Such farm shall receive and provide proper work and care for all such male offenders above the age of sixteen (16) years confined in the penal institutions of the State of Illinois, who may be transferred to such farm by the Department of Public Welfare, and the said department is hereby authorized and empowered to effect the transfer of any of the male offenders described in section one (1) of this act confined in the State penal institutions to such farm, as it deems fit and proper to so transfer, where these offenders shall serve the remaining portion of their sentence imposed by law.

This provision of the statute permits of the transfer of men from either of the prisons or the reformatory, whose cases have been heard by the Division of Pardons and Paroles and the time fixed for them to serve and who appear to be men who will profit by such training as they may receive at the farm by way of preparing them for parole.

Satisfactory results are being obtained along this line. During the coming year it is expected that work on permanent buildings will go forward. At present inmates and officers are using temporary quarters.

In the meantime, in addition to developing the farm land and raising crops, the low land is being protected by the construction of levees along the Kaskaskia River and a creek that runs through a portion of the land.

Connection is being made with the Illinois Central Railroad by building a switch track, which extends to a point near where the permanent buildings will be erected and also along the side of the bluff where moulding sand is found.

Gravel of a quality suitable for road building is being furnished from one portion of the land for the building of macadam roads in the neighborhood of Vandalia. Gravel is found in sufficient quantities not only to aid in road building but to be used in concrete for construction purposes.

This farm can be made a very valuable part of the penal system of the State by carrying out the purposes for which it was created.

MERIT SYSTEM.

The Progressive Merit System is being operated in the several penal institutions of the State to advantage. It proves to be an aid in the matter of discipline and tends to impress the inmates with the necessity of preparing themselves while in prison, so that they will be able successfully to work out the provisions of their parole and become good citizens.

The staff, which operates the system, comes in direct and personal contact with inmates frequently. The study they make of each individual case, qualifies the members of the staff. They submit for the consideration of the Division of Pardons and Paroles a summary of their conclusions with regard to the mental status and the general attitude of each inmate, which has proved to be helpful to the division in determining what disposition should be made of individual cases.

REPORT OF THE SUPERINTENDENT OF PARDONS AND PAROLES.

WILL COLVIN, *Superintendent of Pardons and Paroles.*

Various periods of time produce their own peculiar crimes. In the early forties the people of Illinois dealt with counterfeiting and horse stealing. These were the major crimes of that time. The counterfeiter was incarcerated from five to ten years. Horse stealing was punished almost as severely. With its vast prairies and small population it was a serious thing in those days to steal a man's horse, and leave him alone upon the prairies many miles from a dwelling.

Crime problems which occupied the attention of the people in the forties have now become obsolete. Other crime problems since the forties have been met and solved.

Robbery with a weapon furnishes the crime problem of the present day. As recently as six years ago little attention was paid to the crime of robbery with a weapon. Since 1914 the crime of robbery with a weapon has increased by leaps and bounds. Six or seven years ago robbery was punished by from one to two years incarceration. Until 1919 punishment for robbery with a weapon ranged from one year to life. In 1918 the average for robbery with a weapon in cases that were heard by the Division of Pardons and Paroles was fixed at approximately eight years. In 1919 the legislature enacted a new law providing a sentence of from ten years to life for robbery with a weapon.

The increased punishment for the crime of robbery with a weapon has not served as a deterrent. Since the new law became operative on July 1, 1919, hundreds of boys under twenty-one years of age have been received at Pontiac, either upon conviction or pleas of guilty, with sentences ranging from ten years to life. In their cases, at least, the reformatory feature of that institution is lost. Likewise hundreds of men have been received at the Joliet Penitentiary also with sentences of from ten years to life. The number similarly sentenced from the down State counties to Chester is much smaller. Chicago is the great sufferer from this class of crime.

Yegg burglary, which occupied the attention of the people as a major crime problem for twenty years prior to 1915, has now become a lost art. Robbery while armed has taken its place. A yegg burglar was a peculiar individual who studied safe blowing from every angle. When working he lived beside a camp fire, usually along a railroad track, removed every mark of identification from his clothing, buried his tools

in the ground and cooked "the soup" back in the woods. The yegg burglar worked at night and only came in contact with a police officer or night watchman.

In his place has come the youthful bandit with a large revolver, who works in the day time and depends upon the firing of shots, the crashing of glass and an automobile to furnish a ready and quick means of escape.

Neither parole laws nor their administration will solve new crime problems. Attacks upon parole laws will not better conditions. The problem must be met and solved in a more intelligent manner. History reveals vast crime waves have followed great wars. Crime conditions in America and in other countries, following the World War, are no different than they were after other great wars in which people were taught to fight and kill.

The psychology of suggestion bears an important relation to crime. About five years ago the first daylight bank robbery in the country took place in Chicago. Throughout the length and breadth of the United States newspapers heralded the details of that daylight robbery, thereby revealing the ease with which banks can be robbed in daylight. Youthful bandits took the cue with the result that one bank after another in the city of Chicago was robbed in daylight. The new crime spread to the down State with like result. From the down State daylight bank hold-ups spread throughout the country until now bank hold-ups are almost a daily occurrence.

Dependence upon burglary insurance alone for protection is practically an invitation to daylight bandits. In most banks the employees are told that the funds are protected by insurance and that in consequence no official should endanger his life in their protection.

When the fee for this insurance becomes high enough to make it prohibitive, banks will place an officer in their institutions and protect him by a bullet proof cage. One good officer so protected can shoot down bank bandits as fast as they come in. Bank hold-ups will diminish when the banks depend for protection upon an officer in a bullet proof cage instead of insurance.

COOPERATION WITH LAW ENFORCING AND COMMITTING AUTHORITIES.

No human agency—either court, judge, jury or paroling authority—can determine accurately how long persons should be incarcerated before parole.

The public mind loses sight of the fact that every person sent to a penal institution—except the life termers, and he is such a small per cent of the total—is coming out some day if he lives. He is coming out either upon parole or with his sentence served in full. That being so the after-care and supervision to be exercised over the person released upon parole has been made as important a factor in Illinois as the question of time to be served by the prisoner for his crime.

During the first twenty years' operation of the Illinois parole law little attention was paid to after-care or supervision. Under the present administration of the parole law by the Department of Public Welfare, under the Division of Pardons and Paroles, no person is released upon parole until suitable employment has been obtained. No sponsor is accepted for a paroled prisoner until he has been investigated and found to be a fit person to take another person upon parole.

In the larger cities throughout the State the police department is advised where each parolee works in the daytime and where he sleeps at night. It is an unbreakable rule that no parolee can remain outside of his home after the hour of nine o'clock at night. In many of the larger cities, outside of Chicago, the parolee when arriving reports direct to the chief of police. Cooperation by the paroling authorities and the local law enforcing agencies in the various cities and counties has produced great good, both to the community and the individual upon parole. It has been a task of great magnitude to educate parolees to an understanding that they will find ready assistance in the police departments so long as they are law abiding.

Until the present system of after-care and supervision was inaugurated police departments and the paroling authorities never so much as met upon a common ground to discuss the problems in which each had an equal interest. Paroling authorities and law enforcing agencies meet now upon the common ground that if persons upon parole are committing crimes the paroling authorities want them back in the institutions as badly as the law enforcing agencies want to be rid of them.

At the end of twenty years' operation of the parole law a system had grown up under which it was practically impossible for any person to successfully do a parole in Illinois. Supervision and after-care, as exercised at this time, have so changed these conditions that every man coming out of prison can return to right living and become law abiding if he so desires.

Men upon parole are no longer automatically discharged at the expiration of one year. At this time many men have been placed under supervision for periods as great as five years.

SUPERVISION FOR TRAINING SCHOOLS.

During the year the work of the Parole Department of the Division of Pardons and Paroles was increased by taking on the supervision and after-care of girls upon parole from the Girls' Training School at Geneva, and of boys upon parole from the Boys' Training School at St. Charles. The two training schools each have three field agents. It is physically impossible for three agents to properly supervise several hundred upon parole who are scattered throughout the State.

Under the plan worked out by the managing officers of the two training schools and the members of the Division of Pardons and Paroles, girls and boys upon parole from Geneva and St. Charles hereafter will receive the same close supervision and after-care that is exercised over parolees from the penal and reformatory institutions. Under the new plan of supervision for girls and boys out of the training schools, the Parole Department expects to take over at once the supervision of approximately 400 girls from Geneva and approximately 600 boys from St. Charles.

Mental deficientes are no longer placed upon parole until the Division of Criminology says it is reasonably safe to release them. Cooperating together the Division of Criminology and the Division of Pardons and Paroles have worked out a plan under which the low grade mental deficientes are taken from the penal institutions and placed in a State hospital best suited to the treatment of the individual. Incarceration in a penal institution for a period of time does not prevent the person of low mentality from committing other crimes. Custodial care in a hospital, under treatment by doctors and physicians specially trained in their work, may produce results that are not obtainable through incarceration in a penal institution or a reformatory. In many cases of mental deficiency an error was made in the first instance when the individual was incarcerated in a penal institution instead of being committed to a hospital. Errors of this character are committed almost daily. In many of these cases the penal institutions and the parole law should not have been charged with responsibility.

PAROLE SUPERVISION EXERCISED BY CHICAGO OFFICE.

For purposes of parole supervision the State has been divided into ten parole districts. District No. 1 includes Chicago and ten counties lying across the northern portion of the State. The number upon parole in District No. 1, practically all of whom are in Chicago, was considerably smaller at the end of the year than in previous years. On December 31, 1921, 344 persons remained upon parole in District No. 1. This number was divided as follows: Joliet 190, Pontiac 148, and Chester 6.

The monthly report for December, 1921, illustrates the character of work performed by the Chicago office of the Parole Department. In part the report follows:

PAROLE REPORT FOR THE MONTH OF DECEMBER, 1921—DISTRICT NO. 1.

	Joliet.	Pontiac.	Chester.
On parole December 1, 1921.....	181	129	5
Paroled during December.....	27	26	1
Served parole and finally released.....	13	4	0
Transferred out of State.....	2	0	0
Returned for violation and hearing.....	3	1	0
Sentenced on new charge.....	0	1	0
Wanted as violators.....	0	1	0
Held in jail awaiting trial.....	4	9	1
House of correction.....	1	1	1
Total.....	208 18	155 7	6
Total deductions.....	18	7	0
	190	148	6

PENAL POPULATION LARGEST IN STATE'S HISTORY.

At the close of the year 1921 the penal population was the largest in the State's history. The two penitentiaries at Chester and the Reformatory at Pontiac are filled to overflowing. At the close of the year Joliet had 1,835 inmates, Pontiac had 1,160 and Chester had 1,050; a total of 4,045.

The Joliet Penitentiary is enabled to care for its large population by reason of the fact that more than 400 of its inmates are employed upon construction work at the new prison and upon farm work at the State Farm. In addition it has been possible to relieve the crowded condition at the old prison by the transfer of some of its inmates to the Vandalia State Farm. Were it not for the fact that more than 400 inmates committed to the Joliet prison are cared for at the new prison, at the State Farm and at the Vandalia State Farm, it would be necessary at this time to close the Joliet prison to incoming inmates.

EXECUTIONS IN ILLINOIS DURING THE YEAR 1921.

Thirteen executions for capital offenses took place in the State of Illinois during the year 1921. This is the largest number of executions during any one year in the history of the State.

The total number of executions in 1921 would have reached fourteen had not Tommy O'Connor, under death sentence in Cook County, escaped from the county jail on Sunday, December 11, 1921, four days prior to the date fixed for his execution.

Appeals for executive clemency were heard by the Division of Pardons and Paroles in the thirteen cases in which the death penalty was inflicted. It is peculiarly noticeable that no application for executive clemency for Tommy O'Connor had been presented up to the time of his escape, four days in advance of the date set for his execution.

In the opinion of the members of the Division of Pardons and Paroles there was not sufficient reason in any one of the thirteen cases to warrant a recommendation to the Governor for executive clemency.

Upon the recommendation of the Division of Pardons and Paroles the Governor denied executive clemency in all of these cases.

While the number of executions during 1921 is the largest in the history of the State, it is also the largest in the history of Cook County. Of the thirteen executions, ten were in Cook County. The other three came from the down State counties of Williamson, White and Champaign. From 1840 to 1921, inclusive, there have been seventy-three executions in Cook County. Three executions took place in Cook County in each of the years of 1885, 1898, 1899 and 1919. Four executions took place in Cook County in each of the years 1887, 1896 and 1918. Five executions took place in Cook County in each of the years 1904, 1906 and 1912. In 1920 a total of seven executions took place in Cook County. The Haymarket rioters were executed in 1887 and the car barn bandits in 1904.

Executions in Illinois during 1921 took place on the following dates:

Edward Brislane, February 11, 1921.
Settimi DeSantis, February 11, 1921.
Sam Cardinella, April 15, 1921.
Joe Costanzo and Sam Ferrera, April 15, 1921.
Frank Lowhone, April 15, 1921.
Grover C. Redding and Oscar McGavick, June 24, 1921.
Antonio Lopez, July 8, 1921.
Harry Ward, July 15, 1921.
Carl Wanderer, September 30, 1921.
John Christmas, October 21, 1921.
Frank Ligregni, November 9, 1921.

A brief history of each case follows:

EDWARD BRISLANE was executed for the murder of William Mills. Mills was the proprietor of a picture show house. About 10:30 p. m. on the evening of March 11, 1920, Brislane attempted to hold up the box office at the picture show. Mills came into the box office just as Brislane commanded the woman cashier to put up her hands. He was shot in the right side by Brislane and died almost immediately. Brislane had served a term in the Pontiac Reformatory, was released on industrial parole in November, 1918, and had been given a final discharge on May 27, 1919. Following his discharge on the Pontiac conviction, he gained considerable notoriety as the author of a continued newspaper story, under the heading "Beating Back," which was published in one of the Chicago dailies.

SETTIMI DE SANTIS was executed at Marion, Williamson County, for the murder of two boys, Tony Hemphill and Amel Calcaterra, on August 2, 1920. Bianco, his associate in the crime, committed suicide by hanging himself in the county jail at the end of the fourth day of their trial.

SAM CARDINELLA, leader of the so-called "Cardinella gang" of young bandits, was executed for the murder of Andrew P. Bowman, proprietor of a saloon and restaurant, and a customer in Bowman's place

of business by the name of Wendell. The killing took place during a hold-up on June 24, 1919. Cardinella conducted a pool room a short distance from the Bowman saloon. His pool room was the rendezvous of young bandits who made up the so-called "Cardinella gang." Cardinella was not present at the time of the killing and did not actually participate in the hold-up. He was indicted, convicted and executed as an accessory to the murder.

JOE COSTANZO and SAM FERRERA were executed in Chicago for the murder of Anthony Varchetto on June 15, 1920. The killing was the result of an attempt to hold up the Cimmino bakery and grocery at 709 Forquer Street. Costanzo and Ferrera were members of the so-called "Cardinella gang."

FRANK LOWHONE was executed at Carmi, White County, for the murder of Mack Nottingham. On April 4, 1919, Lowhone shot Nottingham while he was sitting on a bench in front of a store in Carmi. His explanation for the killing was that the people of Carmi were running over him and trying to drive him out of town.

GROVER C. REDDING and OSCAR MCGAVICK were executed in Chicago for the murder of Robert L. Rose, a member of the United States Navy, stationed at the Great Lakes Naval Training School. On June 19, 1920, Redding and McGavick, one of them known as the Abyssinian Prince, conspired with others to burn an American flag on the following day. They armed themselves with rifles and pistols and on the following day desecrated an American flag by burning it in front of the Entertainers' Hall. Their action caused a riot in which a colored police officer named Owens was wounded. Robert L. Rose, a jackie from the Great Lakes Training Station, witnessed the desecration of the flag and made an attempt to rescue it. Rose was shot and ran into the store of the United Cigar Company for aid. The defendants followed him and fired other shots which caused the death of the Naval jackie and also of Mr. Hoyt, the manager of the store.

ANTONIO LOPEZ, another member of the "Cardinella gang," was executed in Chicago for the murder of Anthony Varchetto, who was killed in the Cimmino bakery and grocery hold-up.

HARRY WARD was executed in Chicago for the murder of a man named Gleason. On June 15, 1921, Ward held up the store of "Al The Hatter." While the hold-up was in progress a crowd gathered in front of the store. As Ward ran out he began shooting. One of the bullets struck Gleason, causing his death. Another bullet struck Frank Schultz, who was working near the store, and inflicted a wound from which he also died at a later time.

CARL WANDERER was executed in Chicago for the murder of the "ragged stranger." On June 21, 1920, Wanderer killed his wife and the "ragged stranger" in the vestibule of their home. At the November, 1920, term of the Criminal Court of Cook County he was

found guilty of the murder of his wife, and sentenced to the Joliet Penitentiary for a term of 25 years. He began serving his prison sentence on November 11, 1920.

At the March, 1921, term of the Criminal Court of Cook County, Wanderer was tried and found guilty upon the indictment charging him with the murder of the "ragged stranger." His case is peculiar in the annals of crime in that the "ragged stranger," for whose murder he paid the supreme penalty, has never been identified.

JOHN CHRISTMAS, colored, was executed at Urbana, Champaign County, for the killing of his wife. The crime was committed on April 15, 1921. Christmas cut his wife's throat with a razor.

FRANK LIGREGNI was executed in Chicago for the murder of his wife, who, at the time of the killing, was teaching school at Bartlett, a short distance from Chicago. The killing took place at the home where his wife was boarding, just prior to the holidays of 1920. Ligregni had gone to Bartlett to see his wife and to make an appeal to her to give up her position as teacher in the schools at Bartlett. Ligregni killed his wife with a revolver he took from her while they quarreled in the bed room at the boarding house.

EXECUTIVE CLEMENCY BY THE GOVERNOR.

Upon the recommendation of the Division of Pardons and Paroles, the Governor extended clemency in a total of thirty-four cases during the year. Of the thirty-four recipients of clemency twelve were serving sentences in Joliet, nine were serving sentences in Chester, ten were serving sentences in the Chicago House of Correction, and three were serving sentences in the county jails.

The following table shows the work of the Division of Pardons and Paroles during the year upon applications for pardon or commutation of sentence:

ACTION UPON APPLICATIONS FOR PARDON OR COMMUTATION OF SENTENCE.

	Joliet.	Chester.	Pontiac.	House of correction.	Jails.	Total.
Commutations.....	12	9	0	10	3	34
Denial.....	37	27	8	4	9	85
Continuances.....	3	1	1	0	0	5
Stricken.....	3	2	2	1	0	8
Pending.....	24	23	3	4	1	55
Total.....	79	62	14	19	13	187

The following table shows the parole work of the Division of Pardons and Paroles during the year:

PAROLES ORDERED AND CASES ACTED UPON BY THE DIVISION OF PARDONS
AND PAROLES DURING THE YEAR 1931.

	Joliet.	Chester.	Pontiac.	Total.
Paroles ordered.....	429	293	453	1,175
Orders in other cases.....	1,384	509	617	2,510
Total.....	1,813	802	1,070	3,685

The above tables reveal that the Division of Pardons and Paroles actually made orders during the year in 3,882 cases. Cases in which special reports are made and cases which are reviewed upon the vast number of letters received by the Governor and by the Division of Pardons and Paroles are not contained in the 3,882 cases in which orders were made during the year, and consequently would not furnish an understanding of the great bulk of work which passes through the Division each year.

In one way or another the Division of Pardons and Paroles comes in contact every year with more than 5,000 cases, without taking into account the work that is incident to the supervision of those upon parole throughout the State from the penal, reformatory and correctional institutions.

REPORT OF THE CRIMINOLOGIST.

HERMAN M. ADLER, M. D., *Criminologist.*

The total number of patients received at the Institute for Juvenile Research during the year ending June 30, 1921, was 1,183. The different agencies sending patients and the number in each case were as follows:

Courts	175	Schools	57
Hospitals	246	Social Agencies	559
Practitioners	52	Voluntary	94

The procedure in these cases was as usual a physical, psychological, psychiatric and social examination, with re-examination when necessary, or a more intensive investigation of the social background by the Social Service Department, and in selected cases intensive social treatment. The Social Service Department has carried on field investigation and social treatment in 227 cases during the year. These cases were referred by other departments of the Institute for Juvenile Research, the State Training School for Girls at Geneva, the St. Charles School for Boys, the State School for the Feeble-minded, Kankakee State Hospital, Chester State Hospital, Joliet Penitentiary and the Women's Prison.

Besides these intensive field investigations and treatment cases the Social Service Department has taken 798 histories in the clinic and has followed up by inquiries, from parents' homes and from social agencies, 936 cases examined at the institute. The object of this social follow-up work is to study and record methods of treatment and to assist in treatment by suggesting changes when indicated.

Besides this routine work, there is a certain amount of investigative or intensive work to report for each department.

In addition to the regular physical examination metabolism tests were given in a number of cases with a view to discovering any possible correlation between glandular disturbance and feeble-mindedness or behavior difficulties. Glandular disturbance is characterized by marked deviation from the previously ascertained normal basal rate. In one such case a noteworthy deviation from the normal was found. The patient was given thyroid injection and at the third test, six weeks later, showed a deviation of only 3 per cent, with marked improvement of the mental condition.

Institute for Juvenile Research, 721 South Wood Street, Chicago

FOR STUDY AND TREATMENT OF BEHAVIOR PROBLEMS IN CHILDREN

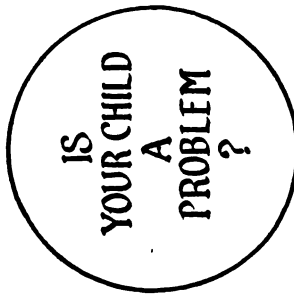


CHART I.

YOUR CHILD!	
IS HE -	HAS HE -
Backward in school?	Tell imaginary lies? Sleep disturbances?
Hard to manage?	Have bad sex habits? Anxieties?
Cruel and vicious?	Avoid other children? Fears?
Truant?	Blues?
The above are some common complaints for which children are referred to the institute	

CHART II.

The Institute studies and treats children from all over the State referred by -
1. Parents teachers physicians
2. Juvenile and other Courts
3. The Board of Education
4. State Institutions
5. Hospitals
6. Other Social Agencies
Experts in child study hold clinics in various parts of the State

CHART III.

The Child is studied by a group of specialists in
1. Medicine
2. Nervous and Mental diseases
3. Intelligence Tests
4. Social Examination

CHART IV.



CHART V.

A study of the child for the prevention of crime and mental disorders in the adult

Among other research, during the past year, the Division of the Criminologist has attempted to deal with the following problems:

1. The relation of intelligence to criminality and delinquency. The method of securing this data was by a series of surveys of the various penal and reformatory institutions of the State. These surveys took account of approximately 1,000 inmates of the State Reformatory at Pontiac, 1,800 of the Southern Illinois Penitentiary at Chester, 800 boys at the St. Charles School, 400 girls at the State Training School for Girls at Geneva, 45 inmates of the Girls' Industrial School at Bloomington, 45 inmates of the Home for the Friendless, Springfield, and 32 children at the Soldiers' Orphans' Home, Normal. The results of these surveys are soon to be published.

2. A second problem investigated was the degree of intelligence in subnormal school children, the data for which was collected by means of surveys of the various public and other schools throughout the State.

3. A third problem, the measurement of volition, is a piece of work undertaken by one of our psychologists with the object of determining the relation between volition and intelligence in Negroes and whites. The procedure in this experiment was a mechanical test repeated on one hundred whites and one hundred Negroes, from which the statistical results are being compiled.

4. Another member of the Psychology Department has attempted to determine the relative amount of suggestibility in defectives and adequates by means of twelve tests, invented by her for this purpose and performed on 150 children of school age.

5. A fifth problem under investigation is the determining of the validity of intelligence tests. For this purpose certain tests have been repeated on the same child after an interval of weeks or months, to see whether the rating remains constant. This operation was performed in the case of several children and the coefficient of correlation determined.

6. A sixth problem is the attempt on the part of another of our psychologists to determine the significance of irregularity in response to mental tests, the data for which is still being collected.

7. Research has also been done this last year along the line of inventing new mental tests for infants, and these tests have been tried out at the State Fair and various baby health conferences throughout the State.

Outside the routine work of the Psychiatric Department—that of coordinating the findings of the other departments, physical, psychological, social and determining the nature of difficulties presented in the individual cases—several special investigations have also been made. These are:

1. A study of mental tests as applied to dementia praecox cases.

2. A study of the relation between certain behavior difficulties or mannerisms and mental rating, these mannerisms being reactions to the physical examination.

3. The development of personality studies in infants.

4. The compiling of a word association test for children, modelled on the Kent-Rosanoff for adults, but differing from it in some fundamental respects.

5. A psychiatric survey of the penal institutes, Joliet and Pontiac, with a view to determining types of crime.

6. The compiling of an outline of mental examinations to be used for children.

In addition to the investigative and treatment work of the Social Service Department, attention has been given to certain other activities.

The University of Chicago, Department of Sociology, has continued to send groups of students for field work one day a week. There is a new group of about twelve each quarter. The instruction which they receive at the institute is planned to supplement the theoretical work which they are taking. It is in no way intended to train them for social work; it does serve, however, to give them an insight into a possible field for later training.

During the spring quarter it became a department of the University of Chicago, the School of Civics and Philanthropy also used the Social Service Department as a training station.

A more intensive course of instruction than any of the foregoing was given for six months, beginning June 21, 1920. This was a graduate course in public mental health and was designed to train social workers in the examination and treatment of behavior problems. The theoretical work covered 144 hours in human behavior, psychiatry, psychology and clinical technology. The remainder of the time was spent in field work with occasional inspection visits to State institutions.

This year the Social Service Department has spent some time on special studies. In August, 1920, the Social Service Department added a special recreation worker to its staff. Recreation had always played an important part in the case work of this department, but hitherto it had been used rather as a means of controlling leisure time than as a real therapeutic measure. The first need in this work was found to be a study of local recreational resources. There were three principal parts to this study, namely: securing definite information concerning daily schedules in order to facilitate recreational placing; tabulating this information into a convenient card index; planning a basis of cooperation with the various institutions having recreational features. The study covers public and private (philanthropic) recreation. Some of the special recreation problems of the Social Service Department of the institute are taken up; as, for example: mentally handicapped children,

the Negro, and girls paroled from the State Training School. A study has also been made of recreational advantages in Chicago industrial plants and another of recreational facilities in suburban towns. An analysis of different types of recreation in terms of personality has been started.

The Social Service Department has completed 180 full investigations of girls committed from Cook County to the State Training School for Girls, and 56 investigations for Joliet Woman's Prison. This is a bulk of material which lends itself well to study, the investigation having been very intensively made and almost uniformly recorded. An analysis of these data is under way.

STATE PSYCHOPATHIC INSTITUTE.

H. DOUGLAS SINGER, M. D., *Alienist.*

The work of the State Psychopathic Institute for the year ending June 30, 1921, has been developed with the object in mind of preparing for the transference of the direction of the institute to the College of Medicine of the State University as soon as the new Psychiatric Institute shall be completed. For this reason special attention has been given to the development of the out-patient clinic at the College of Medicine. During the year, 517 new cases have been examined and patients have made 2,579 visits to the clinic. The figures for the preceding year were 398 and 2,323 respectively.

Since January, 1921, when the services of two social workers was secured, statistics have been kept upon 352 cases. The following table gives briefly the nature of the findings made:

Psychoneuroses	87
Other functional	4
Manic depressive psychoses.....	10
Dementia praecox	24
Paranoid conditions	4
Epilepsy	14
Epilepsy with psychosis.....	1
Alcoholic psychosis	1
Morphinism	1
General paralysis of the insane.....	10
Juvenile general paralysis.....	2
Cerebro spinal lues.....	6
Cerebral arterio-sclerosis	9
With dementia	1
Mental deficiency	79
Psychopathic personality	20
Mental examination for various reasons.....	18
Neurologic and other diseases.....	66
	352

Of the psychoses 34 were recommended for commitment, the others were kept under supervision in the community. Only 3 cases of mental deficiency were recommended for commitment, the small number being largely due to the overcrowding at the Lincoln State School and Colony.

Since January 1, 1921, patients living in Chicago on parole from the Kankakee State Hospital have been supervised from this clinic and 71 have been under observation during that time. In addition investigations into the social history and conditions of patients in State hospitals have been made in 39 cases. The social workers have also undertaken investigation of the social history in selected dementia praecox cases as part of a research problem.

The School of Psychiatric Nursing maintained at the Chicago State Hospital has given instruction to the following pupils during the year:

Regular students	3
Affiliated students:	
Army school of nursing.....	44
Clarkson Memorial Hospital.....	4
Illinois Training School.....	2
Presbyterian Hospital.....	24
	<hr/> 74
Post-graduate students	9
Total	<hr/> 86

STATE PSYCHOPATHIC INSTITUTE

FUNCTIONS

LABORATORIES

FOR STUDY
OF NERVOUS
AND MENTAL
DISEASES

CHICAGO STATE HOSPITAL

MENTAL HEALTH CLINIC

FOR STUDY
AND TREATMENT
OF NERVOUS AND
MENTAL DISEASES

UNIVERSITY OF ILLINOIS
COLLEGE OF MEDICINE

PSYCHIATRIC SCHOOL OF NURSING

SPECIAL TRAINING
IN NURSING OF
NERVOUS AND
MENTAL
DISEASES

CHICAGO STATE HOSPITAL

EDUCATION AND INSTRUCTION

PHYSICIANS OF
STATE HOSPITALS
SOCIAL WORKERS,
PUBLIC

UNIVERSITY OF ILLINOIS
- AND -
CHICAGO STATE HOSPITAL

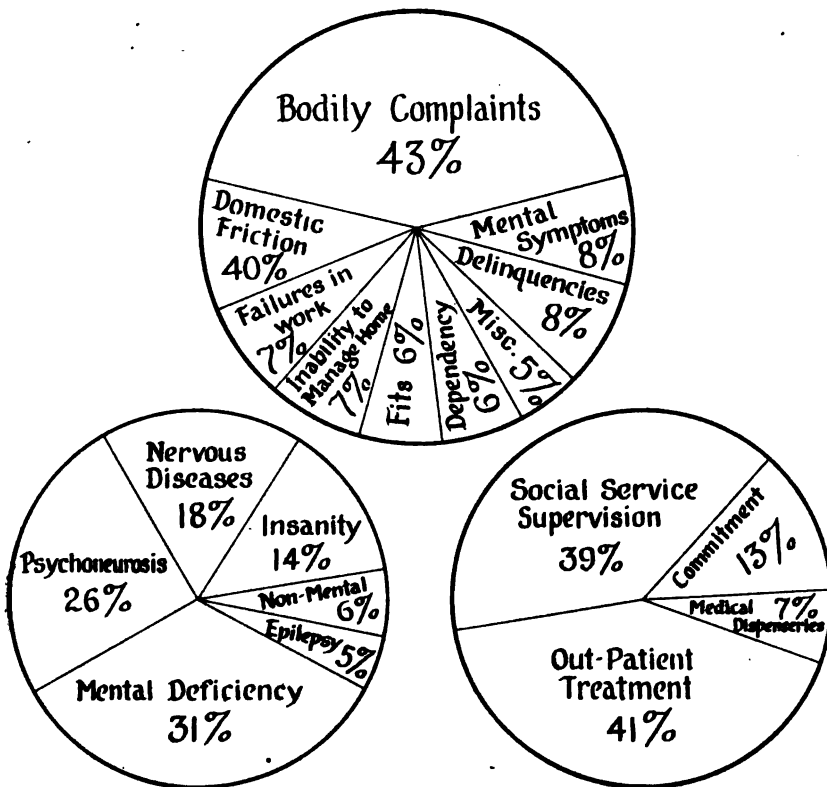
Certificates of the satisfactory completion of a 4 months' affiliated course or a 6 months' post-graduate course have been awarded to 60

STATE PSYCHOPATHIC INSTITUTE

MENTAL HEALTH CLINIC

Held at -

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE



students. Six students failed or left the school. One regular student has completed the three-year course and has been awarded the diploma of the school.

In estimating the services which these pupils render to the State it must be remembered that the average length of service given by attendants is about two months.

One course of instruction covering a period of 3 months was given to assistant physicians at the Chicago State Hospital but it has been impossible to assemble other classes for the purpose owing to the shortage of medical officers in the hospitals which is steadily increasing.

In cooperation with the Institute for Juvenile Research a summer course was given to social workers in psychiatry, neurology and laboratory technique during the summer of 1920.

The laboratory work has been mainly routine and during the year Wassermann reactions have been performed on 4,929 blood specimens and 2,333 spinal fluids. A plan for the intensive clinical and laboratory study of selected cases has been outlined and preliminary work in the development of technique has been carried out. To put this investigative work into effect requires considerable increase in the staff and also beds for the special observation of cases. No effort has been made to secure these additions because of the uncertainty as to tenure of office and the request from your office that no additions be made to the force.

Dr. G. B. Hassin was appointed as Pathologist on a temporary permit, on October 23, 1920, and has been conducting investigative work in nervous histo-pathology, the results of which have been published in various journals.

REPORT OF FISCAL SUPERVISOR.

FRANK D. WHIPP, *Fiscal Supervisor.*

The State charitable and penal institutions are owned and maintained by tax paying citizens in every walk of life in Illinois, and they are entitled to have full information in regard to institutional financial affairs.

There are certain people of Illinois who do not take much stock in the theory and probabilities of social reform, but desire to see practical demonstrations, which at times are difficult to present to the public, because this department deals exclusively with human problems. However, as the financial means at hand is closely related to solving these human problems, the accomplishments of all of the divisions in the department should be considered as a whole in reading divisional reports.

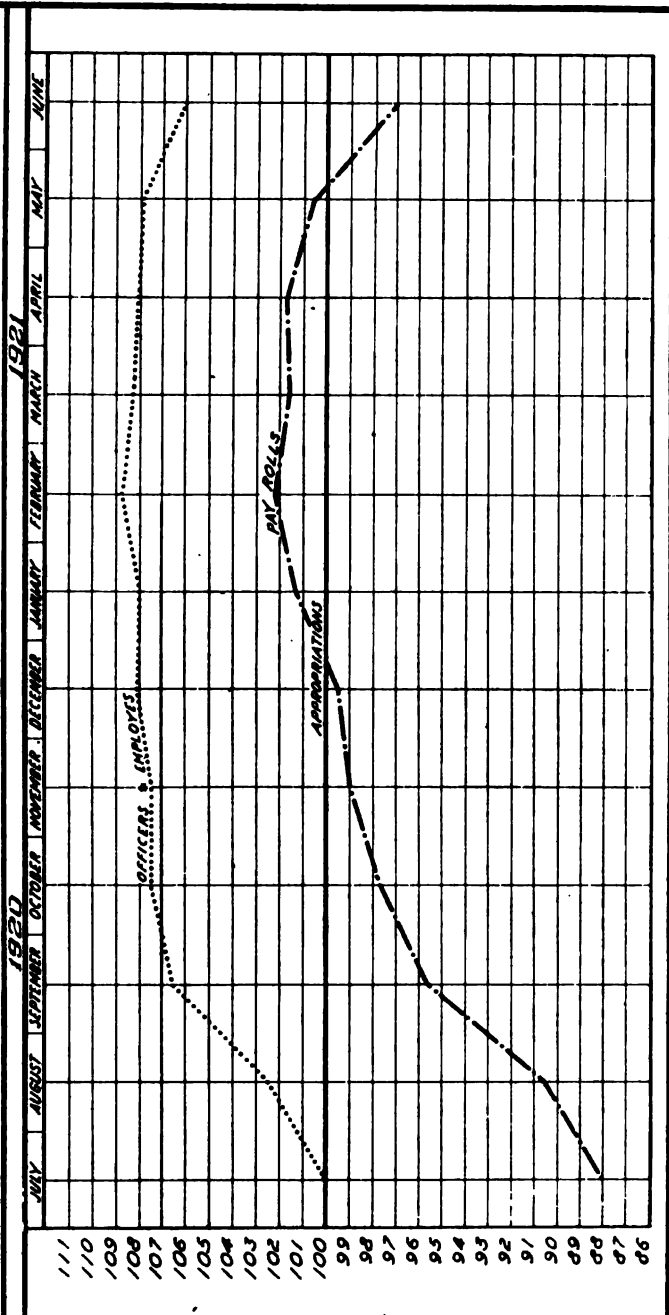
The General Assembly has been most liberal in providing appropriations for the use of institutions. Public care of these unfortunates has been provided economically without impairing the efficiency of the service. Present prices are not altogether as low as they were before the war, and wages of officers and employees are considerably higher, but the institution finances are now running in a uniform way so that the department will be able to present more conservatively its requirements for appropriations to the next General Assembly.

It will be my endeavor to furnish herewith, briefly, a summary of the institution finances covering the last fiscal year, and your attention is invited to the charts and statistical tables accompanying this report.

The expenditures of all divisions in the Department of Public Welfare for the fiscal year amounted to \$11,116,817 and a statement is appended showing the expenditures classified. As stated in my last annual report, the deficiency in appropriations was approximately \$2,000,000.

The Fifty-second General Assembly appropriated \$12,939,758 for the year ending June 30, 1922, and a classified statement of these appropriations is appended to this report. Statements showing per capita costs and expenditures classified by the different groups of institutions are also appended. In the statement showing per capita food costs, the cost of feeding the insane is shown to be 5½ cents a meal. This and other costs shown only represent the bills paid by the institution for food stuffs, but do not include the cost of preparation of food, the serving, and the food stuffs that have been produced on the institution farms, gardens and dairies. It will be noted that the food cost is almost double

PAY ROLLS - ALL DIVISIONS
 PERCENTAGE RANGE SHOWING INCREASE OR DECREASE IN NUMBER OF OFFICERS AND EMPLOYEES
 AND MONTHLY EXPENDITURES FOR YEAR ENDING JUNE 30 1921
 COMPARED WITH APPROPRIATIONS



in the penal institutions compared with the institutions for insane. This is accounted by the fact that these men, or the most of them, are robust, do outside work and require a greater amount and more expensive food. The tables appended showing the price range of certain articles indicate that all food prices are receding.

The statement showing the summary of profit and loss and income account of institution industrial activities, is also appended. This statement indicates a gross profit for all of the industries of \$441,904.04. To this statement is appended exhibits showing the accounts making up the summary. These statements will also show the output of the industries, in pieces, where they can be shown briefly.

A movement of population statement is also appended which will show the increases of institution population mentioned in the report of the director.

A chart is also printed showing the population of the State hospitals for the insane and the penal institutions compared. This is an interesting table which should be studied carefully as it indicates offhand, that there is a close relationship between the two classes of inmates.

A chart of the deaths and discharges of the different institutions is printed herewith. There is also a chart showing the percentage of death rate to the total enrollment at the Soldiers' Home at Quincy and the Soldiers' Widows' Home at Wilmington.

A recapitulation of the Department of Public Welfare inventory dated September 1, 1920, which is the only inventory taken during the fiscal year, shows a total valuation of property of \$27,050,171. This inventory is classified: Lands, \$2,832,896; improvements, \$18,974,846; furniture, \$1,273,019; equipment, \$55,349; farm implements, \$103,788; machinery, \$1,436,383; small tools, \$75,133; laboratory and testing apparatus, \$21,851; medical and surgical apparatus, \$44,193; special equipment, \$351,728; motor vehicles, \$35,148; live stock, \$344,097; books and maps, \$93,122; museum specimens, \$1,141; fire control apparatus, \$42,571; boats, \$130, and miscellaneous, \$1,364,776.

In conclusion, I wish to express my appreciation and thanks for the splendid cooperation of all departmental officers and employees.

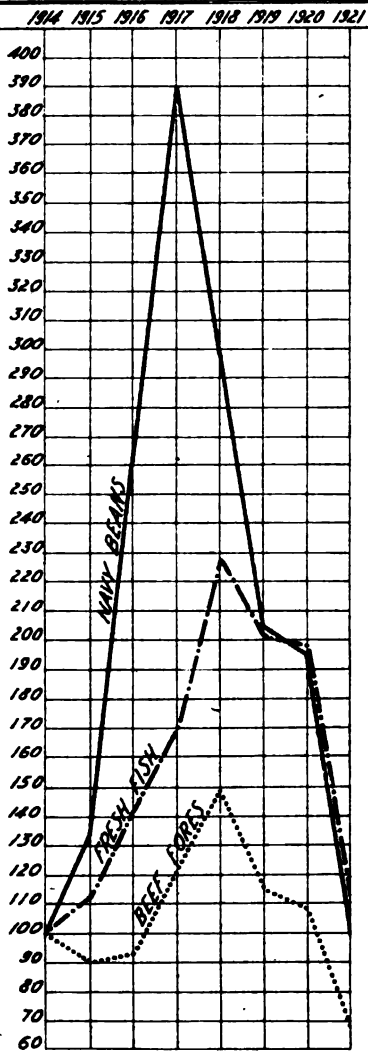
EXPENDITURES OF ALL DIVISIONS IN THE DEPARTMENT OF PUBLIC WELFARE FOR YEAR ENDED JUNE 30, 1921.

Salaries and wages.....	\$3,367,820.00
Office expense	46,783.00
Travel	77,056.00
Operation	2,932,157.00
*Operation and repairs.....	1,856,783.00
Repairs	623,279.00
Equipment	65,583.00
Working capital	69,186.00
Permanent improvements	963,102.00
Land	3,577.00
Lime stone crusher.....	119,981.00
Contingent	36,018.00
Finance reserve (salaries and wages).....	94,841.00
Working capital revolving fund.....	651,860.00
Rehabilitation survey	7,342.00

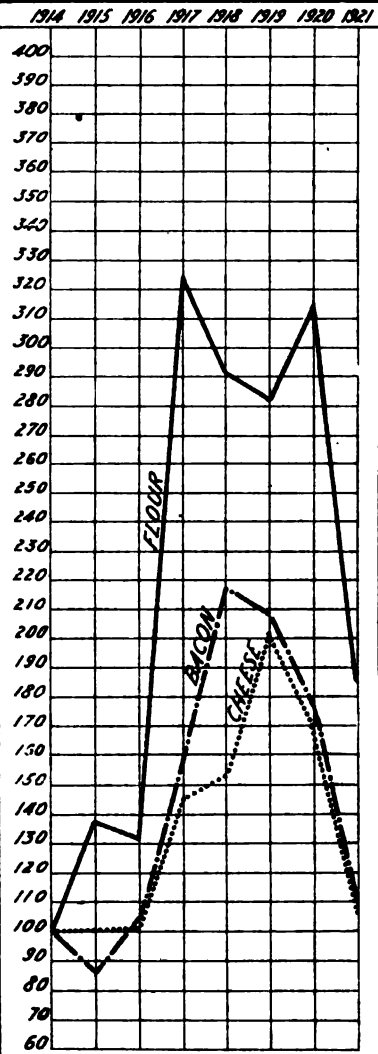
*Note.—Deficiency appropriation.

PRICE RANGE
ON PRINCIPAL ITEMS OF FOOD
PRICES FOR JULY OF EACH YEAR

NAVY BEANS, FRESH FISH & BEEF FORES



FLOUR, BACON & CHEESE



Finance reserve—Barn and cottage at St. Charles Boys' School.....	\$29,319.00
Finance reserve—Retaining wall at Chester State Hospital.....	8,286.00
Finance reserve—Water supply at Southern Illinois Penitentiary.....	3,920.00
Finance reserve—Water supply at Soldiers' Orphans' Home.....	953.00
St. Charles Boys' School—Laundry Building.....	5,174.00
Joliet Penitentiary (emergency).....	4,262.00
	<hr/>
Educational, sub-normal children.....	\$10,967,182.00
	149,635.00
	<hr/>
Grand total	\$11,116,817.00

PER CAPITA FOOD COST BY INSTITUTION GROUPS YEAR ENDED JUNE 30, 1921.
(Based on total population.)

Group.	Number of inmates and employees.	*Total food cost.	*Year.	*Day.	*Meal.
Insane.....	19,841	\$1,184,111 51	\$59 68	\$0.164	\$0.055
Feeble-minded.....	2,312	147,303 81	63 71	.175	.058
Epileptic.....	409	34,117 24	83 42	.229	.078
Patriotic.....	1,871	155,325 94	83 02	.227	.078
Educational.....	2,357	154,742 86	65 65	.18	.06
Penal.....	4,077	440,199 72	107 97	.296	.099
Eye and Ear Infirmary.....	193	19,565 83	101 38	.278	.093
Total or average.....	31,060	\$2,135,367 01	\$68 75	\$0.188	\$0.063

INSTITUTION GROUPS.

Insane.—Elgin State Hospital, Kankakee State Hospital, Jacksonville State Hospital, Anna State Hospital, Watertown State Hospital, Peoria State Hospital, Chester State Hospital, Chicago State Hospital, and Alton State Hospital.

Feeble-Minded.—Lincoln State School and Colony.

Epileptic.—Dixon State Hospital.

Patriotic.—Illinois Soldiers' and Sailors' Home, Illinois Soldiers' Widows' Home, and Illinois Soldiers' Orphans' Home.

Educational.—Illinois School for Deaf, Illinois School for Blind, Illinois Industrial Home for Blind, State Training School for Girls, and St. Charles School for Boys.

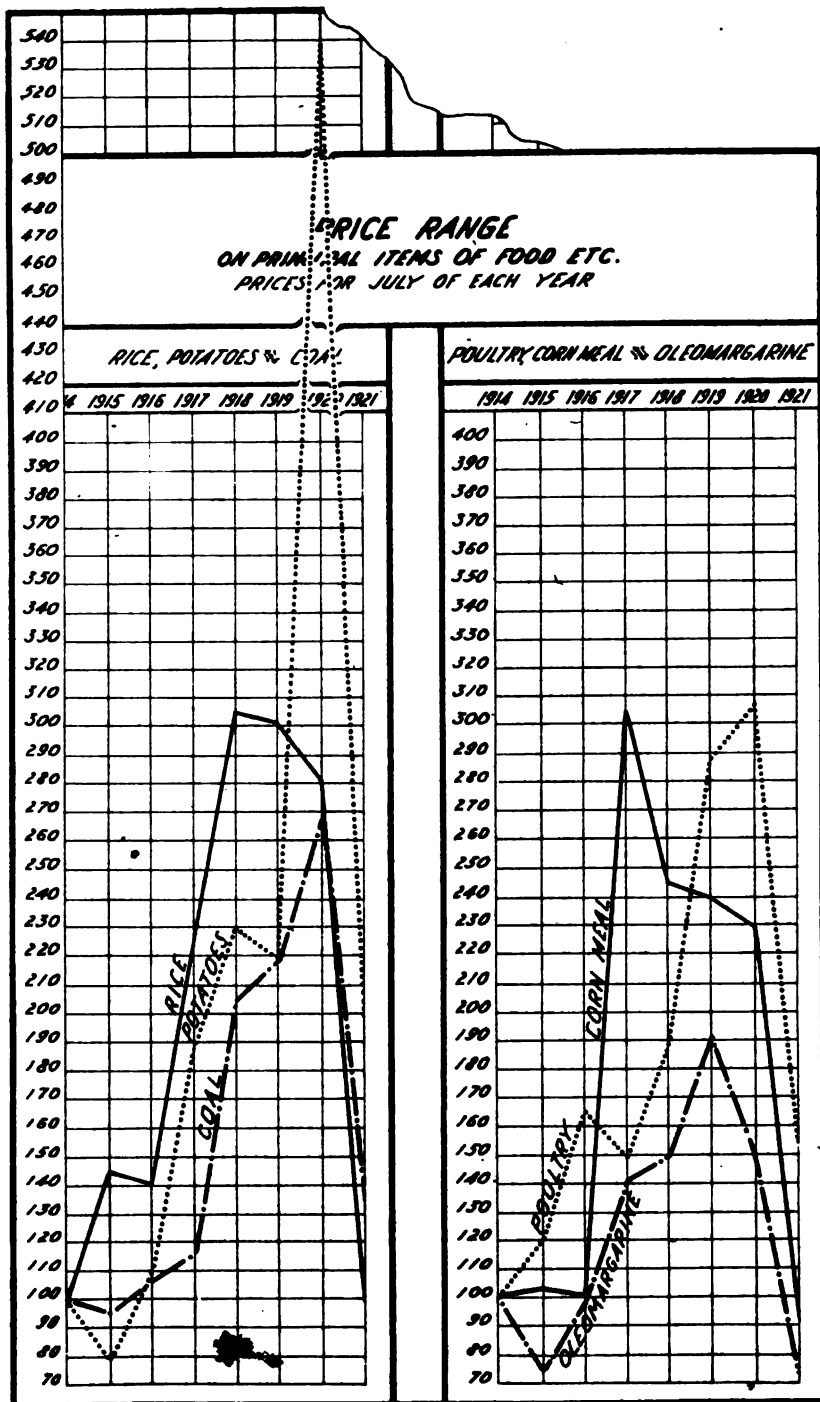
Penal.—Illinois State Penitentiary, Southern Illinois Penitentiary, Illinois State Reformatory, and Illinois Womans' Prison.

Eye and Ear.—Illinois Charitable Eye and Ear Infirmary.

TOTAL APPROPRIATIONS MADE BY THE FIFTY-SECOND GENERAL ASSEMBLY FOR THE DEPARTMENT OF PUBLIC WELFARE, INCLUDING ALL CHARITABLE AND PENAL INSTITUTIONS AND DIVISIONS, AVAILABLE JULY 1, 1921, AND FOR USE DURING FISCAL YEAR ENDING JUNE 30, 1922.

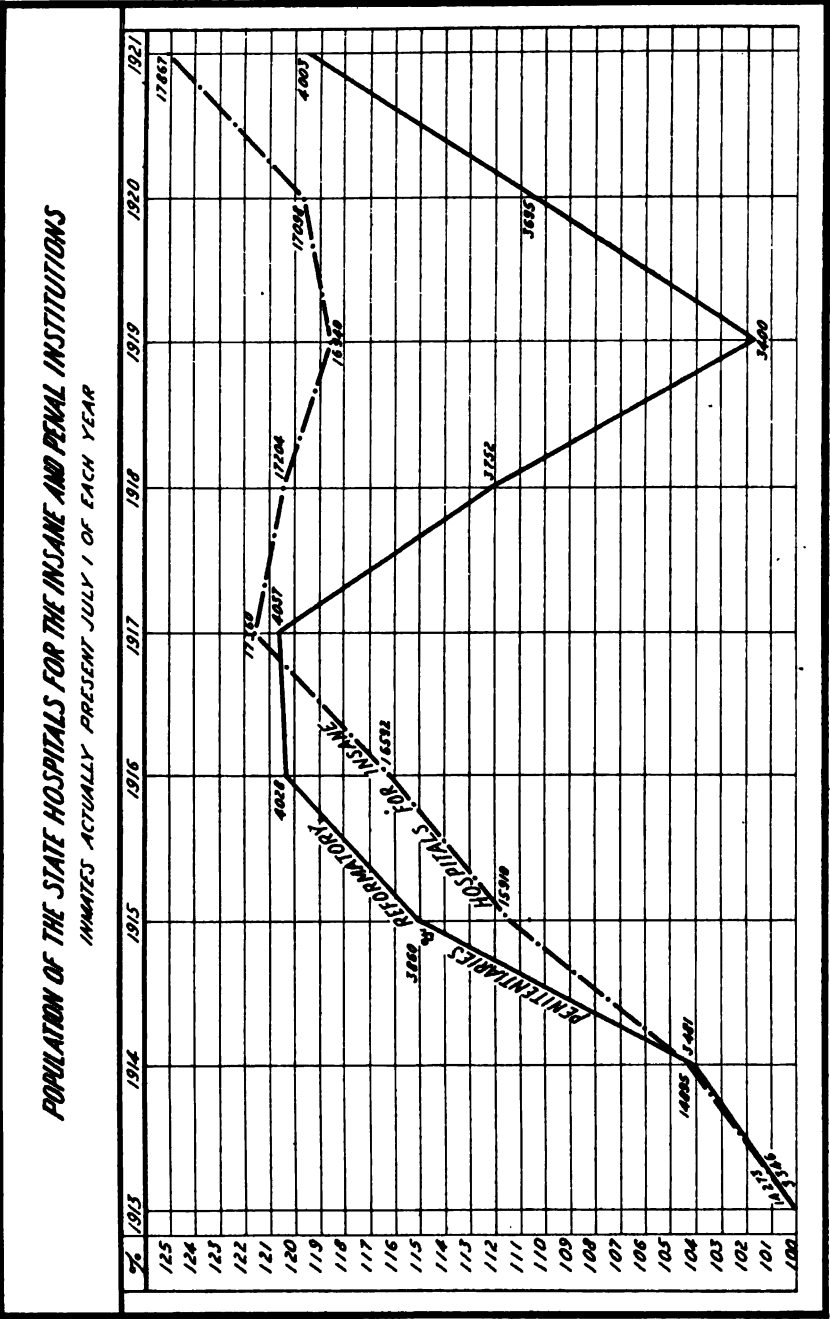
Salaries and wages.....	\$3,959,002.00
Office expenses	56,880.00
Travel	120,415.00
Operation	4,093,789.00
Repairs and equipment.....	1,312,972.00
Circulating library for blind.....	2,000.00
Returning escapes	7,500.00
	<hr/>
Operating—Total	\$9,552,558.00
Road material, Pontiac.....	20,000.00
Dairy cattle	30,000.00
Counties for conveying prisoners.....	89,000.00
Educational, sub-normal children.....	430,700.00
Contingent funds	122,500.00
Buildings and equipment (State hospitals).....	300,000.00
Permanent improvements	2,249,000.00
Land:	
Soldiers' Widows' Home.....	1,000.00
St. Charles School for Boys.....	45,000.00
Illinois Home for the Rehabilitation of World War Veterans....	100,000.00
Grand total	<hr/>
	\$12,939,758.00

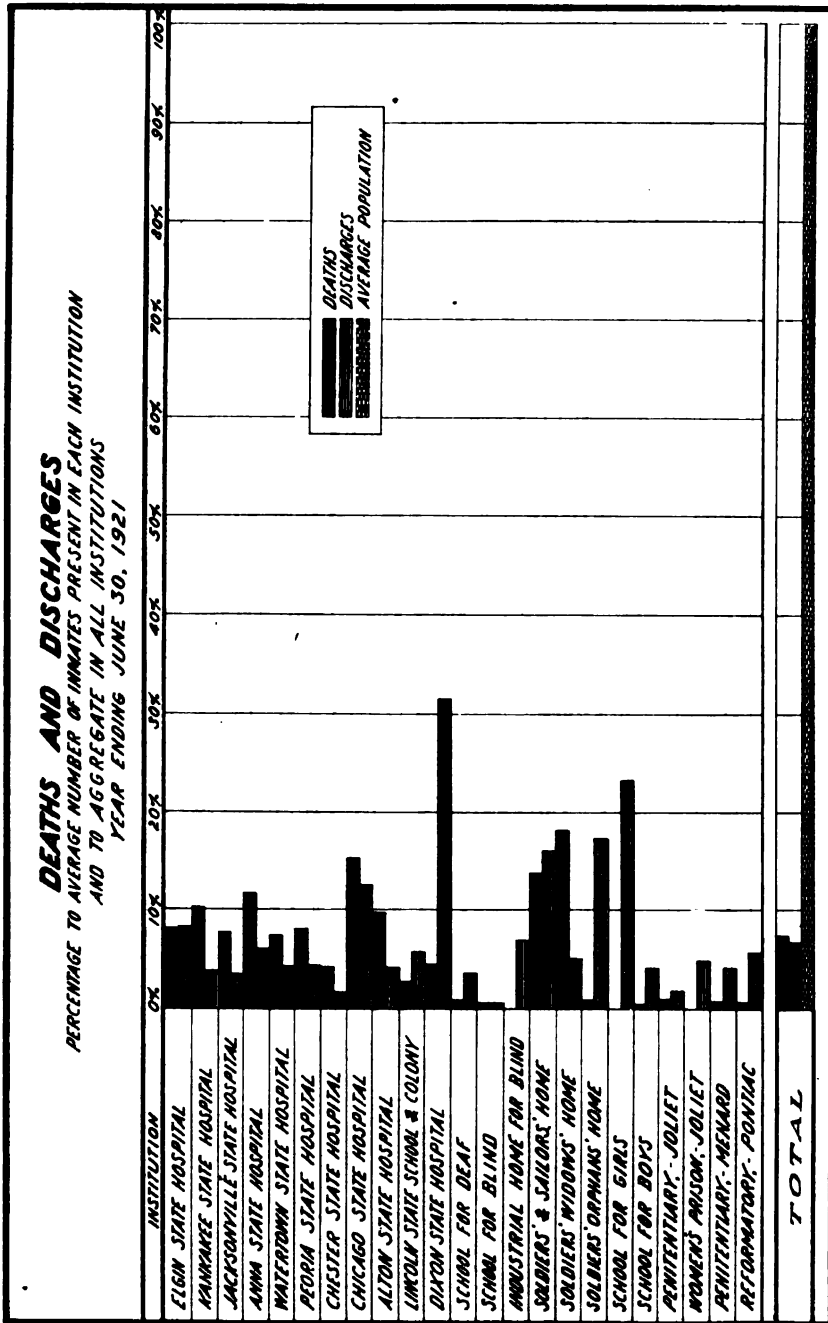
**Notes.*—Only includes articles purchased, but not the cost of preparation, the serving and foodstuffs from the institution farms, gardens and dairies.



MOVEMENT OF POPULATION--INMATES--FOR THE YEAR ENDING JUNE 30, 1921.

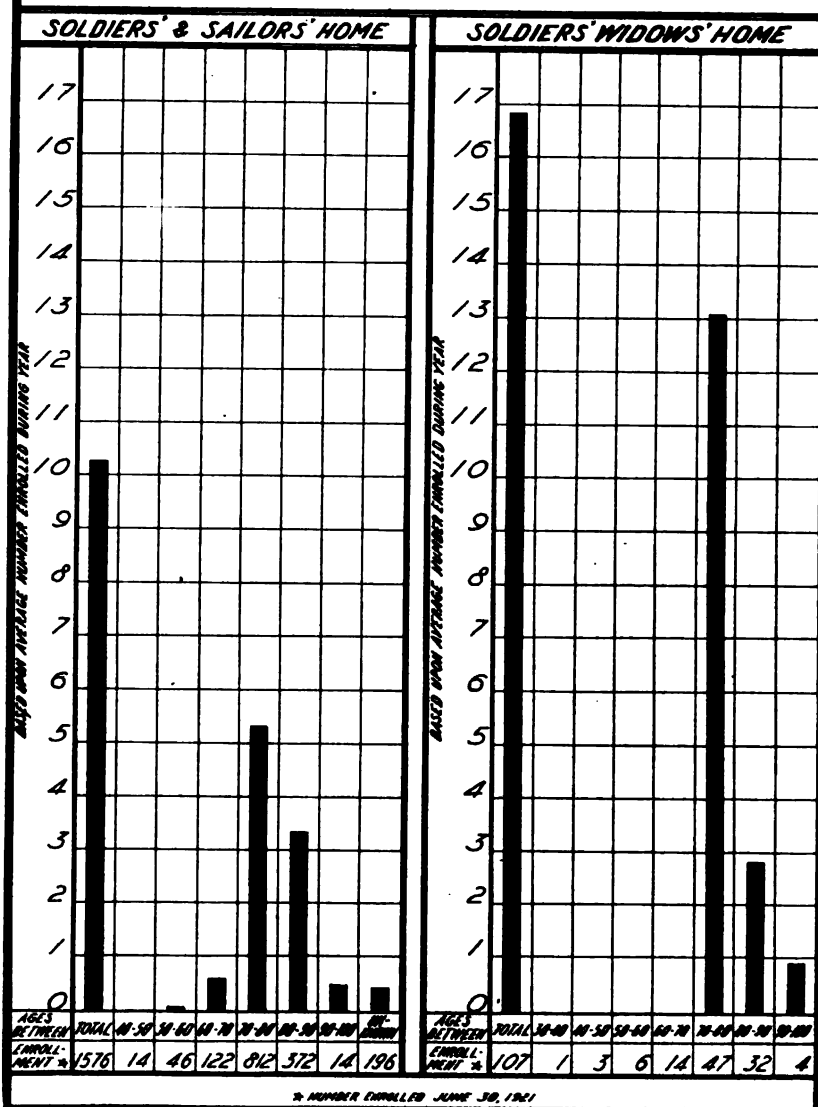
Institutions	July 1, 1920.						June 30, 1921.						Escaped during year. (24 hours or more.)	Average population present.					
	Present.			Absent with leave.			Dropped from roll.	Absent with leave.		Absent without leave.	Present.								
	Males.	Females.	Total.	Males.	Females.	Total.													
Elgin State Hospital.....	972	1,135	2,107	109	30	810	86	184	326	180	82	98	35	1,126	1,111	2,237	256	2,172	
Kankakee State Hospital.....	1,780	1,467	3,247	114	36	798	163	122	251	334	138	93	38	1,853	1,529	3,382	418	2,969	
Jacksonville State Hospital.....	1,124	1,054	2,178	53	17	450	80	76	153	177	30	42	40	1,212	1,065	2,277	199	1,729	
Ana State Hospital.....	964	778	1,742	76	17	391	152	107	32	200	209	74	35	943	778	1,721	306	1,470	
Watertown State Hospital.....	891	739	1,630	39	12	288	64	70	104	121	15	15	33	893	738	1,631	104	1,220	
Pooria State Hospital.....	1,060	1,013	2,073	21	24	434	60	94	63	171	15	32	76	1,229	1,038	2,267	149	1,620	
Chester State Hospital.....	187	187	374	11	49	9	9	3	3	8	42	10	10	193	193	386	98	1,114	
Chicago State Hospital.....	1,700	1,452	3,152	254	11	815	320	420	715	509	138	310	57	1,859	1,648	3,507	400	1,866	
Alton State Hospital.....	348	364	712	20	22	210	31	30	70	109	21	17	17	382	359	741	84	3,349	
Lincoln State School and Colony.....	968	1,080	2,048	136	18	247	18	119	17	57	41	184	9	938	1,102	2,040	155	2,032	
Dixon State Hospital.....	332	332	664	3	7	133	39	105	7	15	13	4	4	372	372	744	38	1,711	
Illinois School for Deaf.....	55	27	82	215	21	41	186	1	6	1	225	225	58	27	85	312	17	377	
Illinois Industrial Home for Blind.....	787	258	1,045	556	2	252	255	184	187	159	4	507	10	786	2,063	2,849	214	84	
Illinois Soldiers' and Sailors' Home.....	186	190	376	12	33	10	5	13	18	3	2	10	18	97	97	214	11	1,152	
Illinois Soldiers' Widows' Home.....	834	421	1,255	676	16	163	11	61	113	4	18	679	18	206	120	326	2	351	
State Training School for Girls.....	843	843	1,686	15	447	15	35	358	4	128	1,023	16	173	811	811	1,622	47	405	
St. Charles School for Boys.....	1,556	267	1,823	158	561	117	31	179	16	157	345	172	3	1,759	1,759	3,518	149	826	
Illinois State Penitentiary.....	1,028	40	1,068	18	2	23	5	2	14	11	22	3	309	21	36	25	2	1,619	
Woman's Prison.....	1,073	1,073	2,146	454	15	542	22	61	254	7	4	628	13	1,033	1,033	2,166	21	1,401	
Southern Illinois Penitentiary.....	1,962	26,963	28,925	5,415	521	8,234	2,028	1,870	3,173	2,059	1,212	5,631	615	16,675	10,358	27,033	438	1,047	
Illinois State Reformatory.....	15,890	10,096	25,986	5,415	521	8,234	2,028	1,870	3,173	2,059	1,212	5,631	615	16,675	10,358	27,033	7,616	1,962	
Total.....																		26,963	





DEATHS

PERCENTAGE TO TOTAL ENROLLMENT
CLASSIFIED BY AGES
YEAR ENDING JUNE 30, 1921



WORKING CAPITAL FUND—SUMMARY OF PROFIT AND LOSS AND INCOME ACCOUNT FOR THE TWELVE MONTHS ENDED
JUNE 30, 1921—INSTITUTION INDUSTRIAL ACTIVITIES.

	Total.	Illinois State Penitentiary.	Southern Illinois Penitentiary.	Illinois State Reformatory.	Industrial Home for the Blind.	Lincoln State School and Colony.	Illinois Charitable Eye and Ear Infirmary.
Sales.....	\$875,956 49	\$344,242 37	\$300,767 26	\$144,268 74	\$57,126 06	\$6,747 01	\$22,715 05
Less returns and allowances.....	4,785 94	2,240 71	156 78		1,925 97	78 07	
Net sales.....	\$871,166 55	\$341,901 66	\$300,610 48	\$144,100 33	\$55,200 09	\$6,668 94	\$22,715 05
Cost of goods sold: see exhibit A.....	429,292 51	176,586 93	146,078 05	43,387 85	44,027 54	4 083 27	15,168 87
Gross profit.....	\$441,904 04	\$165,314 73	\$154,532 43	\$100,712 48	\$11,172 55	\$2,615 67	\$7,556 18
Operating expenses—							
Maintenance of buildings.....	\$ 3,894 29	\$3,894 29	\$8,915 50	\$2,799 40	\$106 63		\$53 05
Maintenance of machinery and equipment.....	21,300 17	9,425 59					
Maintenance of horses and vehicles.....	542 39	542 39					
Maintenance of auto trucks.....	1,906 89	1,906 89					
Maintenance of auto cars.....	1,097 41	1,097 41					
Maintenance of auto tractors.....	3,753 96	3,753 96					
Light, heat and power.....	28,672 35	12,050 03	10,654 28	4,910 40	1,017 63		
Operating supplies.....	23,463 85	16,767 51	4,602 39	2,093 95	7,341 00	\$1,200 00	2,203 69
Salaries of employees.....	76,244 01	21,571 67	16,817 82	27,109 83	18,310 38		
Direct labor paid to blind.....	18,310 38						
Traveling expense.....	79 28	79 28					
General expense.....	2,435 04	1,357 04	127 80	684 21			265 99
Royalty and rentals.....	368 50	368 50					
Seed account.....	4,966 12	2,867 89	1,690 39	407 84			
Stock food.....	50,767 17	26,361 91	9,145 83	15,259 43			
Cartage.....	2,400 01				2,400 01		
Commissions on sales.....	300 20				300 20		
Excavating and teaming.....	4,123 27		4,123 27				
Depreciation of machinery and equipment.....	14,227 68	7,178 76	4,018 92	3,030 00			
Total operating expenses.....	\$258,854 97	\$109,263 12	\$60,098 21	\$56,295 06	\$29,475 85	\$1,200 00	\$2,522 73
Gain on operations.....	\$183,049 07	\$56,051 61	\$94,434 22	\$44,417 42	*\$18,303 30	\$1,415 67	\$5,033 45
Less—							
Free sales of stone, shipped on requisitions of Division of Highways.....	17,160 50	14,103 00	3,057 50				
Free sales of optical goods (glasses, lenses and repairs to same, charity).....	1,524 94						1,524 94
Total gain on operations.....	\$164,363 63	\$41,948 01	\$91,376 72	\$44,417 42	*\$18,303 30	\$1,415 67	\$3,508 51
Add—							
Discount account.....	6,809 25	3,759 29	1,978 49	861 40	*671 21		981 28
Miscellaneous loss and gain items.....	*17 20			17 20			
Total income for period.....	\$171,255 68	\$45,707 90	\$93,355 21	\$45,261 62	*\$18,974 51	\$1,415 67	\$4,489 79

* Loss.

EXHIBIT A
SUMMARY OF MATERIAL COST OF GOODS SOLD FOR THE TWELVE MONTHS ENDED JUNE 30, 1921.

	Total.	Illinois State Penitentiary.	Southern Illinois Penitentiary.	Illinois State Reformatory.	Industrial Home for the Blind.	Lincoln State School and Colony.	Illinois Charitable Eye and Ear Infirmary.
Inventory June 30, 1920, raw materials—							
Work in progress and finished stock.....	\$362,687 27	\$186,970 84	\$86,747 72	\$67,964 24	\$18,355 95	\$2,648 52	
Add purchases for the period.....	507,632 36	285,265 74	124,806 76	60,445 63	37,798 89	4,156 47	\$15,158 87
	\$870,319 63	\$452,236 58	\$211,554 48	\$128,409 87	\$56,154 84	\$6,804 99	\$15,158 87
Less inventory, raw materials, work in progress and finished stock, June 30, 1921.....	441,027 12	275,649 65	65,476 43	85,022 02	12,127 30	2,751 72	
Material cost of goods sold as per summary.....	\$429,292 51	\$176,586 93	\$146,078 05	\$43,387 85	\$44,027 54	\$4,053 27	\$15,158 87

ILLINOIS STATE PENITENTIARY, JOLIET, ILL.—PROFIT AND LOSS AND INCOME ACCOUNT FOR THE TWELVE MONTHS END-
ED JUNE 30, 1921.

	Total.	Furniture depart- ment.	Reed depart- ment.	Shoe depart- ment.	Stone depart- ment.	Foundry depart- ment.	Farm section.	Dairy section.	Hogs section.	Poultry section.
Sales.....	\$344,242 37	\$36,078 83	\$88,193 44	\$127,303 72	\$16,018 65	\$7,610 50	\$45,206 04	\$13,859 75	\$8,266 94	\$1,704 50
Less returns and allowances.....	2,340 71	413 11	1,008 92	888 18		30 50				
Net sales.....	\$341,901 66	\$35,665 72	\$87,184 52	\$126,415 54	\$16,018 65	\$7,580 00	\$45,206 04	\$13,859 75	\$8,266 94	\$1,704 50
Cost of sales materials used.....	176,586 93	35,455 81	52,979 63	85,504 48		2,647 01				
Gross profits.....	\$165,314 73	\$209 91	\$34,204 89	\$40,911 06	\$16,018 65	\$4,932 99	\$45,206 04	\$13,859 75	\$8,266 94	\$1,704 50
Operating expenses—										
Maintenance of buildings.....	\$ 3,894 29			\$ 15 26		\$ 150 43	\$2,792 55	\$ 287 71	\$ 1 90	\$136 44
Maintenance of machinery and equip- ment.....	9,425 59	\$1,110 08	\$ 159 14	659 17	5,666 59	449 80	1,038 57	342 24		
Maintenance of horses and vehicles.....	542 39						1,906 89			
Maintenance of autos, trucks.....	1,906 89						1,097 41			
Maintenance of autos, cars.....	1,097 41						3,763 96			
Maintenance of autos, tractors.....	3,763 96			1,224 00	2,027 09	1,986 93	276 84	229 99		55 20
Light, heat and power.....	12,090 03	4,910 28	1,380 00	963 21	5,214 67	1,281 51	3,049 86	187 39	23 86	125 92
Operating supplies.....	16,767 51	5,081 95	889 14	2,075 00	1,780 00		4,725 00	1,650 00		
Salaries of employees.....	21,571 67	5,916 67	5,425 00	64 17						
Traveling expense.....	79 28	15 11		44 67						
General expense.....	1,357 04	71 60	299 59	368 50		1 60	186 71	281 52	490 10	1 25
Royalty and rentals.....	2,867 89						2,867 89			
Seed account.....	26,361 91						11,459 57	5,496 60	8,562 89	842 85
Stock food.....										
Depreciation of machinery and equip- ment.....	7,178 76	2,222 28	426 00	583 20	3,947 28					
Total operating expenses.....	\$109,263 12	\$19,327 97	\$8,578 87	\$5,997 18	\$18,635 63	\$3,820 27	\$33,697 84	\$8,965 45	\$9,078 75	\$1,161 66
Net loss or gain on operations.....	\$56,051 61	\$19,118 06	\$25,626 02	\$34,913 88	\$22,618 98	\$1,112 72	\$11,508 70	\$4,894 30	\$311 81	\$542 84
Less free stone to State Highways.....	14,103 00				\$14,103 00					
Add discount account.....	\$41,948 61	\$19,118 06	\$25,626 02	\$34,913 88	\$216,719 98	\$1,112 72	\$11,508 70	\$4,894 30	\$311 81	\$542 84
Total income for period.....	3,759 29									
	\$45,707 90									
		Output 38,663 Pieces.	Output 13,447 Pieces.	Output 33,042 pairs.	Output 20,800 cu. yds.	Output 95,703 castings.				

* Loss.

SOUTHERN ILLINOIS PENITENTIARY, MENARD, ILL.—PROFIT AND LOSS AND INCOME ACCOUNT FOR THE TWELVE MONTHS
ENDED JUNE 30, 1931.

	Total.	Knitting department.	Clothing department.	Brick department.	Stone department.	Farm and garden section.	Dairy section.	Hogs section.	Poultry section.
Sales.....	\$300,787 28	\$38,236 50	\$161,100 49	\$18,624 07	\$46,125 08	\$16,077 58	\$13,114 08	\$5,904 78	\$1,577 68
Less returns and allowances.....	156 78		92 38		64 40				
Net sales.....	\$300,610 48	\$38,236 50	\$161,008 11	\$18,624 07	\$46,067 68	\$16,077 58	\$13,114 08	\$5,904 78	\$1,577 68
Cost of sales—materials used.....	146,078 08	26,343 68	119,734 40						
Gross profits.....	\$154,532 43	\$11,892 82	\$41,273 71	\$18,624 07	\$46,067 68	\$16,077 58	\$13,114 08	\$5,904 78	\$1,577 68
Operating expenses—									
Salaries of employees.....	6,817-82	\$3,100 99	\$3,395 21	\$2,681 94	\$4,019 68	\$3,630 00			
Maintenance of machinery and equipment.....	8,915 50	1,242 08	908 50	3,628 62	2,543 95	531 84	24 60	2 00	14 91
Operating supplies.....	4,602 39	864 33	263 26	223 10	2,275 67	887 63	51 77		47 03
Light, heat and power.....	10,654 39	587 80	744 00	3,196 85	6,045 94	1,660 39	66 00		
Seed account.....	1,690 39								
General expense.....	1,127 80	11 30	12 70	7 80	94 00				
Stock food.....	9,145 83						5,710 14	2,323 90	1,111 79
Excavating and teaming.....	4,126 27			593 80	599 50	2,927 17			
Depreciation of machinery and equipment.....	4,018 92	660 00	240 00	1,218 96	1,899 96				
Total operating expense.....	\$60,098 21	\$6,466 80	\$5,553 67	\$11,554 87	\$17,519 70	\$9,657 03	\$5,846 51	\$3,325 90	\$1,173 73
Net loss or gain on operations.....	\$94,434 22	\$5,426 06	\$35,720 04	\$7,069 20	\$28,547 98	\$6,420 55	\$7,267 57	\$3,578 88	\$403 95
Less free stone to State highways.....	3,087 50				23,057 50				
Total or gain on operations.....	\$91,376 72	\$5,426 06	\$35,720 04	\$7,069 20	\$25,490 48	\$6,420 55	\$7,267 57	\$3,578 88	\$403 95
Add discount account.....	\$1,978 49								
Total income for period.....	\$93,355 21	Output 26,111 dozen pairs hosiery for institutions and market.	Output 100,450 pieces clothing for institutions.	Output 2,260,000 brick.	Output 31,435 tons agricultural lime—stone dust for the Farmers. Output 5,250 yds. - 1 macadam. Output 20 pieces grave markers. Output 2 pieces cut stone.				

* Loss.

DIVISION OF FISCAL SUPERVISOR.

445

ILLINOIS STATE REFORMATORY, PONTIAC, ILL.—PROFIT AND LOSS AND INCOME ACCOUNT FOR THE TWELVE MONTHS
ENDED JUNE 30, 1921.

	Total.	Fibre department.	Printing department.	Farm and garden section.	Dairy section.	Hogs section.	Poultry section.
Sales.....	\$144,358 74	\$79,513 56	\$22,190 42	\$17,577 77	\$16,283 90	\$7,548 82	\$1,284 27
Less returns and allowances.....	258 41	36 32	13 74	208 35			
Net sales.....	\$144,100 33	\$79,477 24	\$22,166 68	\$17,369 42	\$16,283 90	\$7,548 82	\$1,284 27
Cost of sales—materials used.....	43,387 85	37,815 02	5,572 83				
Gross profits.....	\$100,712 48	\$41,662 22	\$16,593 85	\$17,369 42	\$16,283 90	\$7,548 82	\$1,284 27
Operating expenses—							
Salaries of employees.....	\$27,109 83	\$14,521 66	\$7,356 46	\$2,393 71	\$1,203 00		\$1,545 00
Maintenance of machinery and equipment.....	2,799 40	574 36	1,267 21	937 23	50		
Operating supplies.....	2,093 95	516 62	1,432 36	974 92	19 35	65 71	64 99
Light, heat and power.....	4,910 40	3,099 52	1,830 88				
General expense.....	684 21	157 24	213 24	251 05	12 50		50 06
Seed account.....	407 84			407 84			
Stock food.....	15,259 43			2,028 94	9,661 31	2,546 30	1,022 85
Depreciation of machinery and equipment.....	3,030 00	1,030 20	1,999 80				
Total operating expenses.....	\$56,295 06	\$19,889 60	\$12,110 06	\$7,013 79	\$10,986 66	\$2,613 01	\$2,632 95
Net loss or gain on operations.....	\$44,417 42	\$21,772 62	\$3,483 80	\$10,355 63	\$5,297 24	\$4,935 81	\$1,396 68
Add discount account.....	861 40						
Less accounts receivable loss.....	\$45,278 82						
Total income for period.....	\$45,261 62						
		Output 11,841 Pieces.					

* Loss.

THE DEPARTMENT OF PUBLIC WELFARE.

	Industrial Home for Blind— Broom Factory.	Lincoln State School and Colony —Brush Shop.	Illinois Charitable Eye and Ear Infirmary— Optical Department.
Sales.....	\$57,125 05	\$6,747 01	\$22,715 05
Less returns and allowances.....	1,925 97	78 07	-----
Net sales.....	\$55,200 09	\$6,668 94	\$22,715 05
Cost of sales—materials used.....	44,027 54	4,063 27	15,158 87
Gross profits.....	\$11,172 55	\$2,605 67	\$7,556 18
Operating expenses—			
Maintenance of equipment.....	\$ 106 63	-----	\$ 53 05
Light, heat and power.....	1,017 63	-----	-----
Salaries of employees.....	7,241 00	\$1,200 00	2,203 69
Carriage.....	2,400 01	-----	-----
General expense.....	-----	-----	265 99
Commissions on sales.....	300 20	-----	-----
Wages—blind labor.....	18,310 38	-----	-----
Total operating expenses.....	\$29,475 85	\$1,200 00	\$2,522 73
Net loss or gain on operations.....			
Less free sales of optical goods, glasses, lenses and repairs to same, charity.....	*\$18,303 30	\$1,415 67	\$5,033 45
Add discount account.....			1,524 94
Total income for period.....	*\$71 21	-----	\$3,508 51
	*\$18,974 51	\$1,415 67	981 28
	Output— 10,766½ doz brooms 1,402 doz whisks 1,850 doz toys	Output— 13,505 brushes	Output— 3,502 pairs glasses sold, 428 pairs glasses free to charity
	14,018½ doz. brooms of all kinds		

* Loss.

DIVISION OF FISCAL SUPERVISOR.

447

PER CAPITA COST—YEAR ENDING JUNE 30, 1921—COMPUTED ON CASH EXPENDITURES FROM APPROPRIATIONS.

Institution.	Average number of inmates.	Total.	Salaries and wages.	Office expenses.	Travel.	Operation.	Repairs.
Elgin State Hospital.....	2,172	\$261 25	\$ 94 77	\$1 01	\$1 36	\$148 34	\$ 15 77
Kankakee State Hospital.....	3,268	269 85	104 74	1 16	29	141 89	21 77
Jacksonville State Hospital.....	2,229	241 00	92 62	77	59	129 80	17 20
Anna State Hospital.....	1,720	274 09	120 68	77	36	134 83	17 45
Watertown State Hospital.....	1,620	302 57	126 72	75	24	152 58	22 28
Peoria State Hospital.....	2,114	282 09	102 23	49	16	159 85	19 36
Chester State Hospital.....	186	454 77	196 37	1 73	3 01	243 75	9 91
Chicago State Hospital.....	3,249	265 15	99 31	1 34	78	141 91	21 81
Alton State Hospital.....	712	324 18	109 34	87	39	182 12	31 49
Lincoln State School and Colony.....	2,031	274 25	99 06	50	37	154 87	19 35
Dixon State Hospital.....	331	622 96	180 96	2 16	1 26	361 01	77 57
Illinois School for Deaf.....	377	579 01	335 11	1 62	3 06	191 49	47 74
Illinois Industrial Home for Blind.....	214	544 97	316 78	3 85	9 28	163 88	52 18
Illinois Soldiers' and Sailors' Home.....	1,152	541 03	229 46	7 10	1 21	201 97	101 29
Illinois Soldiers' Widows' Home.....	84	488 68	131 15	62	14	164 51	31 67
Illinois Soldiers' Orphans' Home.....	351	609 29	227 74	3 46	1 71	190 09	99 39
State Training School for Girls.....	351	588 73	196 07	2 68	1 44	316 64	60 78
St. Charles School for Boys.....	406	562 51	190 53	4 10	8 92	235 35	64 39
Illinois State Penitentiary.....	1,619	363 88	114 53	3 14	1 92	296 14	50 98
Southern Illinois Penitentiary.....	1,016	453 54	128 69	2 15	1 06	220 41	25 51
Illinois State Reformatory.....	1,047	389 69	114 56	2 78	1 45	230 31	35 71
Woman's Prison.....	41	787 93	272 37	8 84	8 80	360 82	137 00

TOTAL EXPENDITURES AND PER CAPITA COSTS BY INSTITUTION GROUPS, YEAR ENDING JUNE 30, 1921.

Classification.	Average number of inmates.	Salaries and wages.	Office expenses.	Travel.	Operation.	Industrial working capital.	Repairs.	Equipment.	Buildings and permanent improvement.	Total.
INSANE GROUP.										
Average number of patients.....	17,370									
Total expenditures.....		\$1,830,544 94	\$16,761 72	\$10,025 72	\$2,542,484 05		\$348,039 00	\$22,770 80	\$313,334 97	\$5,083,051 20
Per capita cost.....		105 39	96	58	146 37		20 04			273 34
FEEBLEMINDED GROUP.										
Average number of patients.....	2,031									
Total expenditures.....		201,185 81	1,005 74	752 00	314,752 74	\$ 5,438 17	39,305 70	975 91	227,069 64	790,475 89
Per capita cost.....		99 06	50	37	154 97		19 35			274 25
EPILEPTIC GROUP.										
Average number of patients.....	331									
Total expenditures.....		59,900 43	714 83	416 37	119,492 89		25,676 69	2,540 70	44,066 04	252,808 04
Per capita cost.....		180 96	2 16	1 26	361 01		77 57			622 96
EDUCATIONAL GROUP.										
Average number of pupils.....	1,906									
Total expenditures.....		416,766 90	6,286 70	8,437 64	476,305 29	68,911 31	105,817 99	12,536 00	53,241 83	1,148,303 66
Per capita cost.....		218 66	3 30	4 43	249 90		55 52			531 81
PATRIOTIC GROUP.										
Average number of members.....	1,402									
Total expenditures.....		250,234 48	2,000 25	827 58	310,470 00		67,662 54	3,804 89	20,765 59	664,774 53
Per capita cost.....		156 20	1 25	52	199 42		42 24			399 63
EYE AND EAR INFIRMARY.										
Total number treated.....	53,418									
Total expenditures.....		61,196 23	1,301 88	2,689 94	43,610 62	19,050 12	5,838 14	4,950 07	41,447 66	180,174 66
Per capita cost.....		1 14	03	05	81		11			2 14

PENAL GROUP.		3, 723	447, 203 89	9, 793 64	5, 643 61	920, 040 60	627, 589 04	123, 104 35	4, 745 81	162, 931 85	2, 301, 061 79
Average number of inmates.			130 12	2 83	1 52	247 12		33 07			404 46
Total expenditures.											
Per capita cost.											
RESEARCH AND EDUCATIONAL HOSPITALS (NEW).											
Total expenditures.....\$184, 609 75											
<p>Insane Group— Egin State Hospital. Kankakee State Hospital. Jacksonville State Hospital. Anna State Hospital. Watertown State Hospital. Peoria State Hospital. Chester State Hospital. Chicago State Hospital. Alton State Hospital. Peleeblinded Group— Lincoln State School and Colony. Epileptic Group— Dixon State Colony (new). Dixon State Hospital. Educational Group— Illinois School for Deaf. Illinois School for Blind. Illinois Industrial Home for Blind. State Training School for Girls. St. Charles School for Boys.</p>											
<p>Patriotic Group— Illinois Soldiers' and Sailors' Home. Illinois Soldiers' Widows' Home. Illinois Soldiers' Orphans' Home. Eye and Ear Infirmary— Illinois Charitable Eye and Ear Infirmary. Penal Group— Illinois State Penitentiary. Southern Illinois Penitentiary. Illinois State Reformatory. Woman's Prison. Illinois State Farm (new). Research and Educational Hospital— Psychopathic Hospital (new). Illinois Surgical Institute for Children (new).</p>											

Patriotic Group—
Illinois Soldiers' and Sailors' Home.
Illinois Soldiers' Widows Home.
Illinois Soldiers' Orphans' Home.
Eye and Ear Infirmary—
Illinois Charitable Eye and Ear Infirmary.
Penal Group—
Illinois State Penitentiary.
Southern Illinois Penitentiary.
Illinois State Reformatory.
Woman's Prison.
Illinois State Farm (new).
Research and Educational Hospital—
Psychopathic Hospital (new).
Illinois Surgical Institute for Children (new).

Insane Group—
Eliot State Hospital.
Kankakee State Hospital.
Jacksonville State Hospital.
Anna State Hospital.
Watertown State Hospital.
Peoria State Hospital.
Chester State Hospital.
Chicago State Hospital.
Alton State Hospital.

Feeble-minded Group—
Lincoln State School and Colony.
Dixon State Colony (new).
Epileptic Group—
Dana State Hospital.

Educational Group—
Illinois School for Deaf
Illinois School for Blind.
Illinois Industrial Home for Blind
State Training School for Girls.
St. Charles School for Boys.

RECAPITULATION OF INVENTORY SEPTEMBER 1, 1920.

Institution.	Totals.	Lands.	Improvements.	Furniture and fixtures.	Office equipment.	Farm implements.	Machinery.	Small tools.	Laboratory and testing apparatus.
Elgin State Hospital.....	\$1,656,506 66	\$ 84,716 50	\$1,290,916 00	\$ 89,930 71	\$2,083 50	\$ 6,166 86	\$ 84,650 00	\$ 2,824 55	\$2,714 60
Kankakee State Hospital.....	2,266,969 89	168,000 00	1,665,875 00	171,547 51	2,846 00	6,293 00	100,635 50	4,917 60	1,380 00
State Psychopathic Institute.....	12,055 57			1,602 36	1,866 54		53 00		6,215 37
Jacksonville State Hospital.....	1,546,343 10	166,925 00	1,130,702 59	97,502 00	2,149 80	4,730 66	55,422 29	1,930 89	1,356 35
Anna State Hospital.....	1,505,141 43	64,231 25	1,103,638 54	71,507 88	2,017 77	1,630 00	141,958 41	1,307 45	1,806 69
Watertown State Hospital.....	1,329,653 92	138,947 00	952,856 12	67,948 47	4,550 86	2,824 75	94,906 87	6,830 95	1,854 40
Peoria State Hospital.....	1,767,821 45	121,290 00	1,350,896 58	78,100 67	5,639 70	2,688 50	130,503 83	1,865 05	1,202 51
Chester State Hospital.....	127,570 39		93,170 00	8,460 95	940 70		6,802 85	294 30	130 00
Chicago State Hospital.....	2,729,743 61	500,732 40	1,835,986 93	76,771 18	1,625 50	3,008 00	102,695 60	3,806 31	
Alton State Hospital.....	1,299,790 65	166,005 00	979,724 83	39,723 12	1,213 43	6,047 00	14,735 55	1,865 23	
Lincoln State School & Colony.....	1,431,580 64	205,600 00	995,530 92	105,676 10	4,374 05	5,467 80	53,734 28	3,857 24	1,701 00
Dixon State Hospital.....	1,338,518 34	221,268 99	977,765 54	37,555 54	1,363 67	5,477 43	78,968 32	1,870 24	
Illinois School for Deaf.....	474,024 19	67,125 00	287,232 00	30,560 30	1,300 50	1,052 00	58,191 30	1,052 00	
Illinois Industrial Home for Blind.....	513,886 86	31,900 00	363,475 00	22,654 85	2,836 50	1,848 95	7,339 15	1,052 53	
Illinois Soldiers' and Sailors' Home.....	129,104 88	22,500 00	67,000 00	4,439 85	3,373 15	6,107 10	107,911 53	6,369 84	454 68
Illinois Soldiers' Widows' Home.....	97,881 90	64,130 00	64,761 00	73,316 80	3,174 00	508 90	6,725 97	34 25	126 00
Illinois Soldiers' Orphans' Home.....	391,939 29	38,400 00	228,300 00	8,456 20	1,162 00	593 00	42,752 00	740 40	
Illinois Charitable Eye and Ear Infirmary.....	593,846 94	290,750 00	169,509 09	15,366 97	578 00		6,910 00	174 75	2,991 53
State Training School for Girls.....	633,733 63	12,000 00	491,230 00	40,447 52	2,740 60	3,361 50	27,835 00	1,534 30	2,330 00
St. Charles School for Boys.....	1,633,133 12	158,725 00	738,711 00	55,793 45	2,525 20	9,152 55	35,978 50	3,299 01	30 00
Illinois State Penitentiary.....	2,282,855 19	25,716 00	1,695,333 68	59,508 79	1,733 10	25,289 89	110,349 09	7,689 90	856 66
Southern Illinois Penitentiary.....	1,417,823 08	78,303 50	867,796 78	52,164 82	5,593 00	7,046 84	100,074 66	7,668 74	
Illinois State Reformatory.....	1,270,863 50	83,503 00	898,213 24	28,685 47	2,434 14	1,655 71	32,364 51	13,901 04	101 25
Woman's Prison.....	72,907 00	1,050 00	63,530 60	4,168 74	195 00	5 50	3,993 97	62 10	
Illinois State Farm.....	121,522 00	96,839 95	10,625 00	2,140 75	100 00	2,812 50		38 80	
Total.....	\$27,050,178 16	\$2,832,896 59	\$18,974,846 43	\$1,273,019 70	\$55,349 91	\$103,788 45	\$1,436,383 13	\$75,133 49	\$21,851 04

RECAPITULATION OF INVENTORY SEPTEMBER 1, 1920—Concluded.

Institution.	Medical and surgical apparatus.	Special equipment.	Motor vehicles.	Live stock.	Books and maps.	Museum specimens.	Fire control apparatus.	Boats.	Miscellaneous.
Elgin State Hospital.....	\$1,927 06	\$ 3,083 10	\$2,440 00	\$34,256 25	\$ 1,072 00	\$300 00	\$1,397 50	\$25 00	\$ 57,999 03
Kankakee State Hospital.....	1,351 85	14,369 00	1,100 00	29,240 00	2,770 70		3,068 00		93,009 34
State Psychopathic Institute.....	1,132 00	1,637 20		19,980 00	1,593 70				56,232 97
Jacksonville State Hospital.....	3,353 55	1,635 00	1,370 00	16,673 75	1,109 10	100 00	3,216 00	30 00	77,482 43
Alton State Hospital.....	1,107 47	15,460 23	1,350 00	20,640 00	1,388 60		1,970 25	75 00	60,030 60
Waukegan State Hospital.....	4,439 40	5,116 25	1,359 40	16,673 00	1,493 50		3,303 00		45,188 10
Peoria State Hospital.....	5,782 26	1,314 75	1,050 00	16,732 30	1,019 20		3,140 50		9,432 50
Chicago State Hospital.....	4,401 45	4,575 55	350 00	4,995 00	1,019 50		5,201 75		126,583 80
Chicago State Hospital.....	480 60	8,268 64	501 00	25,175 00	3,228 75		5,651 10		63,520 30
Alton State Hospital.....	1,420 64		1,529 53	21,750 00	68 40		2,700 00		13,519 55
Lincoln State School & Colony.....	2,209 80	7,630 00	1,567 00	10,660 00	21,611 70	275 00	1,740 50		4,376 59
Dixon State Hospital.....	1,048 05		1,100 00	10,350 00	21,465 70		293 00		26,941 88
Illinois School for Blind.....	896 90	60,699 04	800 00	1,550 00		466 00	810 55		1,674 98
Illinois Industrial Home for Blind.....			400 00	15,564 00	5,243 90		636 00		20,901 83
Illinois Soldiers' and Sailors' Home.....	1,032 70	17,056 16	374 00	150 00	25 00				8,774 85
Illinois Soldiers' Widows' Home.....	1,175 05		732 70	2,622 50					5,255 66
Illinois Soldiers' Orphans' Home.....	2,556 31	6,063 17							44,562 87
Illinois Charitable Eye and Ear Infirmary.....									277,413 72
State Training School for Girls.....	8,020 00		1,100 00	9,811 00	500 85		180 00		188,263 63
St. Charles School for Boys.....	8,874 15	845 60					1,555 00		142,695 12
Illinois State Penitentiary.....	2,347 43	68,879 80	5,539 00	27,510 00	4,884 60		2,300 35		
Southern Illinois Penitentiary.....	2,263 43	37,791 33	4,488 23	39,001 97	5,947 98		1,142 70		
Illinois State Reformatory.....	675 75	90,159 82	3,015 50	12,694 90	3,877 77		783 00		
Woman's Prison.....	995 65	23,368 23	4,782 00	25,298 26	3,492 13		525 00		
Illinois State Farm.....			1,300 00	7,665 00	10,752 88		62 00		
Total.....	\$44,193 60	\$351,728 87	\$35,148 36	\$344,097 93	\$93,122 35	\$1,141 00	\$42,571 05	\$130 00	\$1,364,776 26

DIVISION OF VISITATION OF ADULT BLIND.

CHARLES E. COMSTOCK, *Managing Officer.*

I have the honor to submit the annual report for the tenth year's activities of the Division of Visitation of Adult Blind in the Department of Public Welfare.

This division is composed of four sightless teachers, two sighted teachers and one managing officer. Its purpose is to give individual instruction to newly blinded adults in the homes of the pupils in such occupations as tend toward ameliorating their conditions in life. The subjects taught are: Reading and writing revised Braille and the reading of Moontype; typewriting, hand and machine sewing, knitting, crocheting and weaving, basketry, chair caning, fibre work, broom making and the tuning and repairing of pianos and player pianos.

Beside giving instruction in these subjects, our main object is to bring hope into the lives of those who otherwise would probably live in despondency and to teach such helpless people to help themselves; to point out a new way of doing the old things, to bring back to them their former self-confidence and to so inspire them, that they will be encouraged to make efforts to succeed for themselves.

During the year 47 pupils have finished their courses of instruction. At the various bazaars held by this division in cooperation with philanthropic women's clubs and kindred organizations, the home workers have sold \$1,950 worth of their finished products. It has been a great source of satisfaction to have been instrumental also in placing in commercial establishments with sighted people, nine of the most capable of our industrially inclined blind people, and I record with great pleasure that the seven blind men which I took out of the Cook County Almshouse and placed in positions just prior to this year's work, have all managed, in spite of the terrible industrial depression which has befallen us during the past year, to continue to earn their livelihood honorably on the outside and have not been compelled to return to the poorhouse.

Each year approximately sixty adults are stricken with blindness in this State. Three-fourths of Illinois' blind population, which numbers close to four thousand, have lost their sight in adult life, and the work of this division has been of inestimable value to such unfortunates. After five years of home teaching in the city of Chicago, which I carried on under the auspices of the Chicago Woman's Club, the State took over the work in 1911. Since that time, with the assistance of my co-workers, hundreds of newly blinded adults have been aided along life's road, some even being turned from a determination of self destruction, and many helped to earn their own livelihood.

REPORT OF INSTITUTION SURGEON.

S. W. MCKELVEY, M. D., *Institution Surgeon.*

Prior to July 1, 1919, with the exception of a few institutions which took care of their surgical cases in a regular and efficient manner, no attempt had been made to administer surgical treatment to all of the inmates of the State institutions requiring surgical care. It was therefore the purpose of this general surgical service to perfect an organization for the administration of regular and efficient surgical care.

The organization of a surgical service for the charitable and penal institutions involves many phases, such as equipping an operating room, the training of nurses to carry out an aseptic technique, the training of surgical assistants and a dependable anaesthetist.

The surgical result is not dependent upon the surgeon's work alone, but is influenced by the efficiency and cooperation of his assistants.

It has been necessary in a number of institutions to prepare and equip operating rooms. Some required a sterilizer connected or repaired, some the installation of artificial light, others new equipment, such as operating and instrument tables, etc. All this has been done and, while there is still plenty of room for improvement, the results as a whole are fairly satisfactory.

From a surgical standpoint the work is very general; naturally so, as both sexes and all ages are dealt with.

THE INSANE GROUP.

The purpose of surgery upon the insane is not to cure their psychosis, but upon a purely physical principle, primarily to relieve pain and discomfort. These unfortunate individuals suffer from the same physical ailments as the sane. It is quite obvious that they are entitled to be made as comfortable as possible. I have frequently seen the irritable, violent epileptic or maniac become quiet after the relief of some irritating physical cause, such as hemorrhoids, rupture or any abnormal physical condition.

SURGICAL RELIEF.

The type of cases classified as the infective exhaustive group, which are generally characterized by clouding and depression, are no doubt due to a toxæmia from some source of infection. It is in this group of cases, when the focus of infection can be demonstrated and removed, that surgical intervention clears up the psychosis. The same holds true in

some cases of insanity following head injuries, or certain types of disease of the thyroid gland.

I have operated several such cases during the past two years, resulting in mental recovery, one of which I will briefly present:

(C. P.)—White male, age 37, entered Anna State Hospital, November, 1920, in a state of depression. He was placed on the hospital ward, where he remained in a clouded state.

History.—Onset of trouble March, 1920, following an attack of influenza. Became nauseated, vomiting, lost weight and strength, had no acute pain, became depressed. Committed to Anna State Hospital, November, 1920, where he continued to fail both mentally and physically. Operated for pus kidney November 24, 1920, following which the patient rapidly recovered both mentally and physically and left the institution.

More mental trouble may be due to physical causes than we are aware. It is well to be constantly on the alert for such cases; even if relief is only given to an occasional case, it has been worth while. I believe the time will come when it will be demonstrated that a great many of our mental cases have a physical basis for the condition.

SOURCES OF SURGERY.

The State hospital is a small community within itself. It is composed of many different units, each representing some phase essential to the function of the institution. The unit which is of the greatest interest to me is the hospital. There are three sources of surgery in the institution; the hospital, receiving service and routine custodial examination.

On admission, in connection with the routine physical and mental examination, a record is made of any surgical condition found and later the surgical condition is gone into more thoroughly and the question of operation decided. This reveals what might be termed the chronic or selective cases, such as ruptures, chronic gall bladder infections, and especially the gynecological conditions, such as chronic inflammatory conditions of the female pelvis, the uterine tumors, the cases of uterine prolapse, or perineal laceration, the conditions largely due to the injuries of childbirth.

The routine physical examination of the chronic ward cases reveals conditions which may develop in the course of time during the patient's residence in the institution.

The number of acute surgical cases, as compared to the total number of surgical operations, is quite small, for the reason that such cases are operated early, thus removing conditions which are potential sources of danger to life; probably better explained by cases of rupture. Fewer cases of strangulated hernia occur now than formerly for the reason that more herniotomies are done.

PERMISSION.

Permission for operation is obtained from the patient's relative before proceeding with operative measures unless it be a case of extreme emergency and by waiting the patient's life would be jeopardized; then

a telegram is sent to the relative, stating condition of patient and that an operation is being performed. Less than 5 per cent of requests for operations are refused. Relatives, as a general thing, are quite grateful for anything that can be done to benefit the patient.

The patient's consent for operation is also obtained if possible. In this instance judgment must be exercised as there are persons who are so demented that it is impossible for them to decide; that being the case, it is up to the staff to decide, keeping in mind how much the patient will be benefited by the operation and if not operated to what extent life will be endangered. Other patients, of whom there are a great many, are capable of making a decision. To these the situation must be explained and in due course of time they generally decide to be operated.

THE DIAGNOSIS.

The surgical diagnosis upon the insane differs somewhat to that upon the sane. Approximately 50 per cent can give a fairly reliable history, the other 50 per cent can give no history, or the history is much colored with their delusional trend, so the diagnosis must be made entirely from physical examination.

Their complaints following operation are much less than the sane, fewer hypodermics of morphine for pain are required; shock is much less. I think this can no doubt be explained by the "blunting" which is present in the insane. The element of fear is not nearly so acute as in the sane.

Post operative specializing for the first few days must be in some cases quite constant; other cases require no more than the sane. I have never had an operative wound to open up on an insane patient, which shows that their cooperation has been fair; and the cases have not been selected.

THE PENAL GROUP.

March, 1920, the Department of Public Welfare assigned the surgical work of the penal institutions to me. Surgery in this group is much easier than the insane group for the following reasons: The inmates report for the relief of pain or discomfort, they give a clear history, the physical examination can be carried out quickly, in this respect much like the army service.

The operative work is performed with the aid of inmate nurses who do remarkably well.

The work consists largely of hernias, rectal cases, chronic osteomyelitis, and genito-urinary conditions.

RECORDS.

Card (A) enclosed, serves as a report, also classification of case according to mental condition, age, surgical condition, under which a brief description of surgical condition can be entered; permission re-

quested and obtained; date of operation, and under "remarks" what was done. This little card gives a lot of information at a glance.

Surgical record sheet gives complete record of case, history, condition found at operating table, operation performed and notes for progress of case following operation.

SPECIAL CASES.

I thought it might be well to mention several cases of unusual interest; these cases serve to break the monotony of the usual surgical condition found.

During the course of abdominal operation upon one of the girls from Geneva, for a pelvic trouble, in exploring with my hand, I was surprised to come upon a mass of safety pins, pins and needles in the caecum. I opened the caecum and removed six hairpins, five safety pins, one of which was open, three small pins, two needles, three hooks and a small amount of thread. The interesting question is, How did the open safety pin travel through the stomach and loops of small intestine without producing a perforation and causing trouble. Patient admitted swallowing the pin, which was done with suicidal intent. Patient recovered.

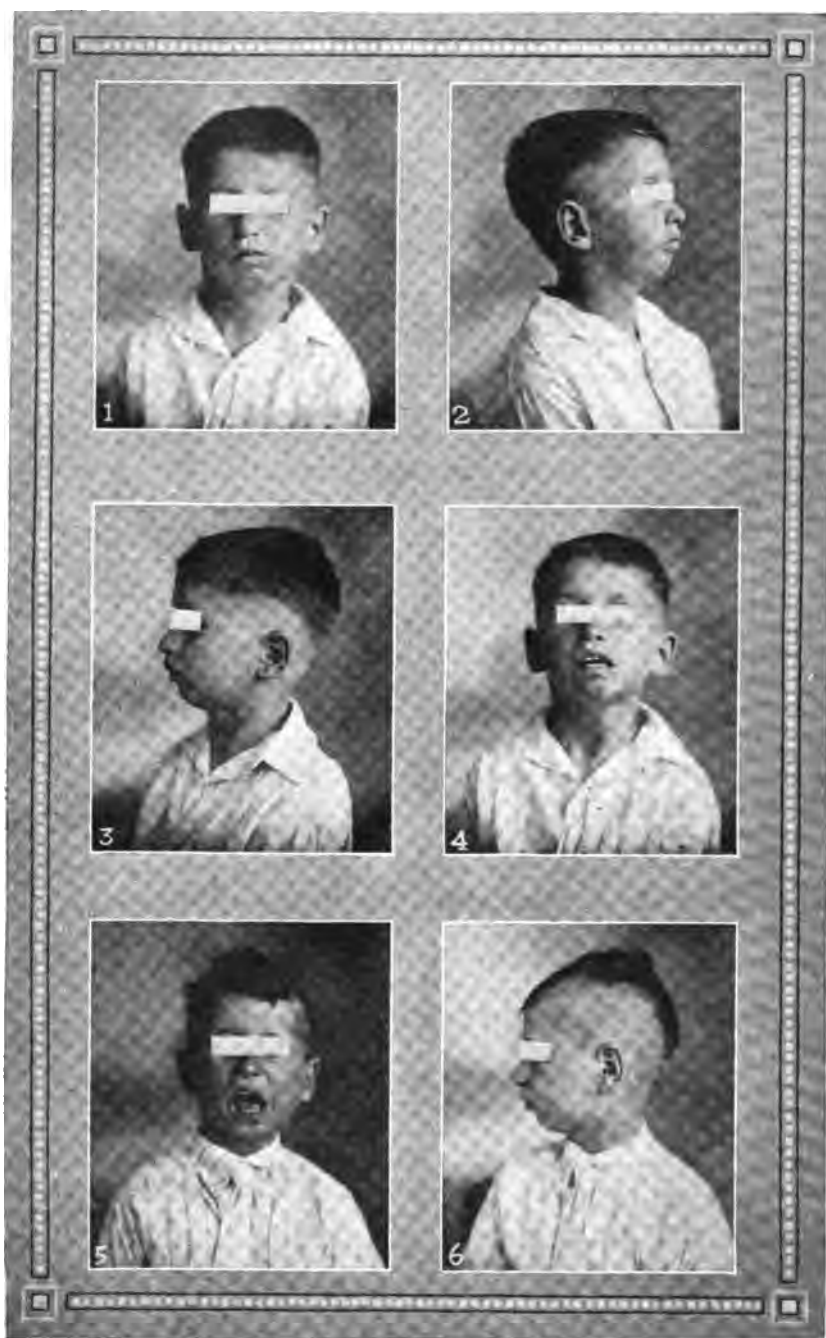
Another patient straightened a hair pin, inserted it between the ribs, directly into the heart. The tip of pin was pushed beneath the skin so it was not noticeable externally. Upon cutting down, the pin was found to be moving up and down with the heart beat. The pin was removed and patient recovered, dying six weeks later of other causes. The case of _____, of the School for Deaf, suffering from an inability to open his mouth more than one-eighth inch, due to ankylosis of the temporo-maxillary joint, has a permanent result and is talking. (See pictures, p. 458, with explanatory notes.)

The surgical work has not only rendered service to patients but has made the institution work more interesting, serving as a stimulus to better work in other lines; as laboratory work. X-ray work. Several more institutions will install X-ray machines, which are quite essential and a protection to the institutions.

In this article I have tried briefly to describe how this surgical service is carried on, its purpose, possibilities and what has been accomplished. I am attaching report of surgical operations performed in the various institutions.

RECORD OF SURGICAL CASE.

Name of patient.....	Case No.....	Date of operation.....
Surgeon.....	Assistants.....	
Anesthetist.....		
Instrument nurse.....	Sponge nurse.....	
Remarks on anesthetic.....		
Brief history and provisional diagnosis.....		



BOY RELIEVED OF ANKYLOSIS.

1—Normal frontal view, showing difference in sides of face; 2—Right lateral view; 3—Left lateral view, side of ankylosis. It was by comparison of views 2 and 3, and by measurements that the diagnosis was made; 4—Frontal view, with mouth open to fullest extent. Notice muscle strain in attempting to open mouth; 5—Frontal view ten days following operation, mouth open; 6—Left lateral view, showing scar, which will be largely covered with hair.

STATE TRAINING SCHOOL FOR GIRLS, GENEVA.

Salpingectomies	4
Herniotomies	3
Cervical adenitis (tuberculous)	1
Tonsillectomies	12
Appendectomies	6
Total	26

The surgical work for this institution was done at the Elgin State Hospital, as the school has no operating room for major work. The surgery here is mostly throat work, and cases of pelvic infection. Fully 60 per cent of the cases suffer from venereal infection with its resultant pelvic pathology. Cases in this institution are given excellent medical attention.

TRAINING SCHOOL FOR BOYS, ST. CHARLES.

Fracture of femur (open reduction)	1
Tonsillectomies	40
Plastic on hand	2
Herniotomies	3
Dislocation hip (reduction)	1
Circumcisions	3
Osteomyelitis tibia curetment	2
Operation for hydrocele	1
Total	53

The surgery here consists mostly of throat work. Among individuals of the age found here there are a great many cases of infected tonsils with secondary complications, such as rheumatism, heart conditions and infections of the middle ear. There are also cases of general surgery, ruptures, bone infection and abdominal conditions.

This institution has a well kept hospital, with a splendid operating room and a very efficient nursing service.

JOLIET PRISON (WOMEN).

Salpingectomies	3
Appendectomies	2
Tonsillectomies	3
Total	9

Of the 47 inmates here, 12 were found to have surgical conditions, 9 of whom required surgical operation. As this institution had no hospital facilities we were at a loss to know just how we could care for them. This was solved by obtaining a nurse, fitting up a temporary operating room, similar to one you would prepare in a private home. The cases were operated, all recovering with an uneventful convalescence.

JOLIET PRISON (MEN).

Hemorrhoidectomies	1
Appendectomies	1
Herniotomies	4
Total	6

The surgical work has just been introduced here. There is a great deal of surgical work to do. I have requests from 40 men for examination, with possible surgical conditions, who will be cared for as soon as possible.

The operative work in the penal group is slower than the charitable, due to the lack of trained help in penitentiary hospitals.

PEORIA STATE HOSPITAL.

Hysterectomies	5
Appendectomies	21
Operation for uterine displacement	6
Plastic vaginal	10
Salpingectomies	4
Herniotomies	13
Ovarian cyst removal	2
Hemorrhoidectomies	4
Prolapse of rectum	1
Cholecystectomies	1
Removal bunion	1
Carcinoma tongue	1
Sigmoidopexy	1
Thoractomies	1
Total	71

Surgical cases in this institution have been cleaned up, that is all of the old operable cases. The cases here are those which are admitted with surgical conditions and those which develop during residence in the institution.

Additional X-ray equipment capable of doing gastro-intestinal and chest work has been added to the X-ray department. This is a splendid move and in keeping with the present day progress of scientific medicine.

JACKSONVILLE STATE HOSPITAL.

Appendectomies	17
Ovarian cyst removal	3
Cul de sac abscess	1
Herniotomies	20
Plastic vaginal	7
Cholecystectomies	5
Mastoidectomies	2
Hysterectomies	6
Correction uterine displacement	1
Tonsillectomies	10
Removal of breast (radical)	2
Prostatectomy	1
Cystostomy (supra pubic)	1
Vesico vaginal fistula	1
Repair ruptured ileum	1
Ventral hernia (repair)	1
Hemorrhoidectomy	1
Amputation finger	1
Total	81

By the number and variety of surgical cases, it is quite obvious that there has been excellent cooperation at this institution. The hospitals have been consolidated, placing both sexes in one building, the operating room improved, and constant additions are being made to it.

Practically all of the old surgical cases have been taken care of here and in the future the surgery will largely care for the new cases.

An X-ray equipment is under consideration. This is much needed, and when obtained will make the hospital unit more efficient although it is now very effectively conducted.

LINCOLN STATE SCHOOL AND COLONY.

Tonsillectomies	22
Fracture of mandible	2
Herniotomies	9
Hysterectomies	5
Appendectomies	9
Ventral hernia repair	1
Salpingectomies	4
Operation hydrocele	2
Hemorrhoidectomies	3

Fracture of elbow (open operation).....	2
Prolapse of rectum.....	1
Osteomyelitis of tibia (resection).....	2
Vaginal plastic.....	2
Cervical adenitis tuberculous.....	1
Urethrotomy internal.....	1
Dislocation elbow (open operation).....	1
Volvulus (ascending caecum).....	1
Total	68

This institution contains the greatest variety of interesting physical conditions of any in the State. It has an abundance of clinical material as well as many abnormal physical conditions peculiar to these cases of defective mental development.

There is a high percentage of cases requiring removal of tonsils and adenoids, much higher among these defective children than among a like number of normals.

At the present time the orthopedic and post infantile paralysis cases are being examined in view of correcting some of these conditions through surgical measures. This will require much tedious and patient effort, but some improvement will result.

The operating facilities, including operating room, assistants and nurses are efficient.

This institution should have an X-ray equipment. It has more need of an X-ray than any institution in the State.

ANNA STATE HOSPITAL.

Hemorrhoidectomies	5
Herniotomies	7
Amputation	2
Rectal fistula	1
Choledochotomy	1
Vaginal plastic	6
Circumcision	3
Ingrowing toe nail (excision).....	1
Correction uterine displacement.....	1
Tonsillectomies	11
Removal of breast (radical).....	1
Hysterectomies	2
Appendectomies	3
Intestinal anastomosis	1
Thoracotomies	1
Operation for hydrocele.....	1
Nephrectomy	1
Dissection inguinal glands.....	1
Total	49

This institution has very good facilities for surgical work. The operating room and personnel is efficient and the cooperation good. The cases receive splendid post operative care. The hospital cases receive very close individual attention.

SOUTHERN ILLINOIS PENITENTIARY.

Tonsillectomies	4
Herniotomies	13
Sacral tumor (removal).....	1
Rectal fistula	1
Hemorrhoidectomy	1
Osteomyelitis of mandible.....	1
Operation for hydrocele.....	1
Orchidectomy (tuberculous testicle).....	1
Brain cyst removal.....	1
Total	24

Surgery is progressing nicely here. It has been well introduced and I have a large waiting list for surgical operations.

CHESTER STATE HOSPITAL.

Dislocation of mandible.....	1
Osteomyelitis of mandible.....	1
Total	2

There are no facilities for major surgery here. Cases requiring surgical attention are taken care of at the penitentiary.

SCHOOL FOR DEAF.

Temporo-maxillary ankylosis	1
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Surgery here is largely confined to the specialties, and is taken care of by Dr. Frank of Jacksonville. However there is an occasional case of general surgery.

Case of a Pupil at the School for Deaf, Jacksonville.—(Illustrations accompanying this report.) This boy, age 9 years, was a normal child up to the age of 18 months, at which time he suffered from diphtheria and scarlet fever, followed by a middle ear infection, which extended to the temporo-maxillary joint, producing an ankylosis; child became deaf and was unable to talk. He remained in this condition. My attention was called to him at the School for the Deaf because he was unable to open his mouth.

From a diagnostic standpoint the interesting question was to find out whether the lower jaw was ankylosed on both sides or on just one side, and if one side, which? It was quite important to know this before operating. It was decided to be one sided, an ankylosis of the left temporo-maxillary joint, which proved to be correct when the case was operated.

Case was operated July, 1920. A new joint was made. The case has a permanent successful result, is able to open mouth properly, and has commenced to talk.

Explanatory notes under the illustration describe the condition.

DIXON STATE HOSPITAL.

Herniotomies	2
Tuberculous elbow	1
Total	3

Dixon has no hospital facilities. These cases were operated at the Elgin State Hospital. However, with the completion of the hospital the facilities for surgery will be satisfactory.

Alton State Hospital.—Only consultation service has been done here. With the completion of the new hospital building the surgery will progress very nicely.

Watertown State Hospital.—There is practically no equipment for surgical work here. However, equipment is being obtained and within the near future this institution will compare favorably with the other State institutions.

The above makes a total of 420 operations, with 9 deaths, or a mortality of less than 3 per cent. There have been no sudden or unexpected deaths. Some of these cases were relieved temporarily by operation, later dying; these cases are accredited as surgical deaths.

REPORT OF FARM, GARDEN AND DAIRY CONSULTANT.

D. S. MCKINSTRY, *Farm, Garden and Dairy Consultant.*

I entered the service of the Department of Public Welfare on March 10, 1921, as Farm, Garden and Dairy Consultant, succeeding C. T. Hoblit.

During the period of March to October I have visited the twenty-two institutions having farm or other agricultural interests from two to five times each, and have become fairly familiar with the agricultural conditions and needs of the institutions mentioned.

In nineteen of these institutions there are farm activities. Eighteen have dairy herds and in all of them there is some gardening done. Poultry is grown in all but one, and ornamental gardening is done in some form in every institution.

In devising policies for the agricultural activities of these institutions I have proceeded on the assumption that these industries exist because, first: Laborers in the nature of patients, convicts, and pupils existed in surplus in institutions, and were not profitably employed at other occupations; second: The gardening, farming, etc., were of decided benefit to those that were employed at it, and third: The products of these industries were much needed in institutions of this class. Bearing this in mind it has been my aim to encourage industries that could employ large numbers of inefficient and low-class laborers, and secondly that the labor performed should be beneficial to the laborer if possible; third, that the products of this labor should be in as far as possible perishable products needed by the institutions producing them, and that could not be as well or better procured from other sources.

The general features of farm operations this year are a large crop of corn of good quality and a fair crop of most other farm products.

The feature of the garden year was an early spring with heavy frosts later followed by a very hot and dry midsummer and a warm wet fall. The result of this was a nearly total failure of the fruit crop, a very light crop of onions and potatoes, a poor crop of cabbage and only a fair crop of other vegetables, excepting melons and other vines which were above the average.

Poultry has been quite successful in most of the institutions during the past year, and all but a few of the places have made a good showing with their ornamental gardening.

Dairying has been much handicapped in many of the herds by tuberculosis. In May all cattle in the State herds were given tuberculin

tests and out of 1,383 cattle tested 365 were condemned. Most of these are now killed or about to be disposed of. The herds most affected were at Elgin, Lincoln, Peoria, St. Charles and Watertown.

Report in detail of the various institutions is as follows, given in as few words as possible:

Elgin State Hospital.—Simon Berg, farmer, doing good work, most crops well tended and handled. Has no gardener or dairyman worth mentioning. Some very fine garden land next to Fox River, much of the farm land rather thin gravel hills. Dairy herd practically wiped out with tuberculosis.

Kankakee State Hospital.—Best equipment of any State farm. Farmer Wright doing only fair work; since discharged. Gardening done better but not up to possibilities. Poultry plant not well handled. Hogs well handled, dairy only fair. All work needs better supervision and better detail plans.

Chicago State Hospital.—Ninety acres of gardening. No farming. Garden mostly spoiled for the year by neglect in early part of season. Since then good work is being done by the new farmer, Kelly. No cattle, a few chickens and quite a bunch of hogs.

St. Charles School for Boys.—Land mostly excellent, only fairly well farmed. Gardening poorly done; poultry and hogs fairly handled. Dairy barns well handled, but dairy herd wiped out by tuberculosis. Needs more able general farm supervision.

Dixon State Colony.—A thousand-acre farm in a beautiful location, much of the land agriculturally good only for pasture, half of the land good farming and gardening land. Farming well done by Mr. Peterson. Garden and dairy still in their infancy, but with foundation for a good future.

Watertown State Hospital.—Beautifully overlooking the Mississippi. Farm and garden land needs drainage but has the making of a fine farm. Live stock has been badly handled. Mr. Craig is doing some good farming but the place has lacked in detail, care and organization.

Geneva Training School for Girls.—Farm small but well-managed. Dairy herd well cared for and of excellent character. Mr. Peter McCallion is one of the best gardeners in the State service.

Joliet State Penitentiary.—The farm of 2,000 acres apparently has never been well managed. I presume there has never been a man employed as farmer that had sufficient vision and capacity to organize so large a farm, or possibly the fault is in the conception of the idea of using criminals of this type to carry on general farming. Whatever is the matter, we have not yet secured desirable results; but believe we are making some progress. The hogs have been especially badly managed; farming not quite so bad. Dairy-ing and gardening fairly well done.

Wilmington Soldiers' Widows' Home.—No agricultural industry except a little gardening; milk bought at a high price of a neighboring farmer. Could be shipped from Joliet if the dairy herd at the penitentiary was made to function.

Pontiac State Reformatory.—A small farm of excellent land. Farm departments rather over-organized for so small a farm. All departments rather well handled, some carelessness in dairy breeding and handling.

Lincoln State School and Colony.—Small farm of excellent land. Barns and live-stock conveniences not well arranged and fences poor. Some excellent work done but better general supervision needed. Dairy herd largely lost by tuberculosis.

Peoria State Hospital.—Rolling clay hills are giving excellent crops of alfalfa, oats and potatoes. Corn not so good. Barns need some rearrangement. Liming will pay well. Heavy loss in dairy by tuberculosis. Excellent garden land on Illinois River, when drained. Both Farmer Snow and Gardener Taylor doing good work.

Jacksonville State Hospital.—Excellent work in farming and gardening. Not enough farm land. Two farms are being rented and more land should

be bought. The institution is furnishing labor for the School for the Deaf and the School for the Blind, as well as having a surplus of labor to do other work. Work here is well organized and more effective than in many institutions.

School for the Deaf.—Small farm well run. Excellent work in dairy and with hogs. Need some drainage and hog-house improvements. Land too valuable to go without improvements.

School for the Blind.—The outstanding features of this institution are its splendid flock of White Leghorns and a small garden well handled.

Quincy Soldiers' Home.—The labor problem here is a serious one, so would not extend agricultural activities beyond the present limits except to rent or buy ten acres more land to grow corn for ensilage for dairy cows.

Alton State Hospital.—A comparatively new institution with about 1,000 acres of fairly good land. Has been growing too much small grain; land badly run down, needs lime, phosphorus and clover, and to specialize on dairy, hogs and geese. Gardening limited at present, but is now developing and as soon as soil is built up, vineyards and orchards should be planted.

Chester State Penitentiary.—Old farm is now mostly in meadow and pasture. New farm on river is in process of development, with splendid soil and great possibilities for farming and gardening. Large appropriations should be made for levying and draining this land. Mr. Douglas, while not a scientific farmer, should be commended for the energy and hard work he has put on this farm to develop it to its present state.

Chester Hospital for Criminal Insane.—A small herd of cows, a few hogs and poultry all well cared for. There should be no further increase in activities on account of the character of the patients.

Anna State Hospital.—Here we have decided on a change in the farming, on account of steep hills and the nature of the soil, cutting out corn for ensilage and seeding to clover and alfalfa, and using cow-peas after the garden crops. Gardening and fruit-growing will be the principal features in the future. Two hundred to three hundred acres should be bought in the Mississippi bottoms ten miles from the hospital for the dairy herd, where farm crops can be grown, and the milk hauled to the institutions by truck. Mr. Halterman and Mr. Ewald are to be commended for their excellent work in farming and gardening, and Mr. Lough should be given opportunity to extend the poultry plant which could be made to pay here.

Soldiers' Orphans' Home, Normal.—Too much land here for gardening, but not enough to farm. Should add forty to sixty acres and establish a dairy herd, because a childrens' institution should have plenty of milk and the dairy herd would help the gardening by furnishing fertilizer. No regular farmer or gardener here, only laborers. With a competent farmer and a dairy herd, better results can be attained.

Vandalia State Farm.—A new State institution of 1,160 acres not yet developed, much drainage and leveeing yet to do. Not well organized this year, and many mistakes and failures to record. Will be in better shape next year. Much of the soil rich, and good possibilities when drained. A good orchard would be profitable at this place.

REPORT OF REIMBURSING INVESTIGATOR.

S. D. McKENNY, *Reimbursing Investigator.*

This division has four specific offices: Reimbursing, deportation, soldiers' claims, and inspection of clothes rooms.

The reimbursing section deals with the collecting of money either from individuals or counties for furnishing clothing for patients at the various institutions. We also have another plan whereby we give the relatives or conservators the privilege of furnishing the clothing themselves if they so desire.

The deportation section relates to returning patients who are either illegally shipped in or wander into our State or become insane before they establish a legal residence. These patients are returned to different states of the Union as well as to foreign countries, and we have sent them as far south as South America.

The soldiers' claims relates to the looking after the collections from the government of money due for soldiers confined in the different State hospitals of Illinois. The present rate allowed by the government for the maintenance of the soldier in the various hospitals is \$1 per day.

The inspection of clothes rooms was brought about when it was discovered the negligent way in which clothing was cared for at the hospitals. Since the inspection program has been adopted, conditions have been improved 100 per cent. These inspections are made on an average of about once in six weeks. We have cards in every clothes room and as the inspection is made the grades are given and marked on the cards. The grades are as follows: "Poor," "Medium," "Good," "Excellent." We find that it has created a marked degree of improvement as every charge nurse when once reaching "Excellent" desires to keep the clothes room in that condition.

The amount of money collected and the value of clothes furnished the hospitals during the fiscal year, July 1, 1919, to June 30, 1920, was \$333,607.41. The number of deportations was 196. Out of this number 51 were returned to foreign countries.

The amount of money collected and the value of clothes furnished the hospitals during the fiscal year, July 1, 1920, to June 30, 1921, was \$334,237.13. The number of patients deported during that period was 176, of whom 30 were returned to foreign countries.

Instead of having 16 men on the road, as we had under the old Reimbursing Department, we now have a young woman in each institution who looks after the work while I am on the road and, also, when she is up with our work she assists the chief clerk in his duties in the office, which has proven a great saving to the State, both as to salary and traveling expenses.

ELGIN STATE HOSPITAL.

RALPH T. HINTON, M. D., *Managing Officer.*

The population of the hospital for the year ending June 30, 1921, has shown an increase of 130. The total population at the present time is 2,369; of these 2,237 are resident and 132 are on parole and escape. During the time covered by this report 569 men and 292 women were admitted. Of this number 93 were re-admissions and 72 were received from other hospitals. The majority of the latter were male patients. This is explained by the fact that a large number of ex-service men were transferred to this hospital for vocational training. Within the same period 116 patients were transferred to other hospitals and 180 have died. Twenty-nine men and 28 women applied and were received as voluntary patients.

The general health of the patients has been good. In March of this year a mild epidemic of influenza occurred, during which thirteen patients and two employees received treatment. Three patients succumbed to lobar pneumonia during the epidemic.

MEDICAL WORK.

In November, 1917, there was established in the medical service of the hospital what we are pleased to term an "efficiency system." This system has been in continuous use since that time and we are now in a position to form conclusions relative to its efficacy. The hospital records during this period will, I believe, speak for themselves. For the most part they are complete. The quality of the examinations made may in some cases be subjected to criticism, but the facts are the patients have been observed, notations relative to injuries, illness, and the like, have been made and the tendency to label the patient with a diagnosis and then forget him has greatly diminished. While the objection that such a system converts medical officers into mere routinists must not be overlooked, the fact remains that adequate records in a large hospital with a large admission rate, can be kept in no other way.

Staff meetings for the consideration of diagnosis and treatment of the recently admitted cases, for the consideration of paroles and for the purpose of re-classification and transfer are held each morning under the direction of the assistant managing officer.

In July of last year, your department adopted a system of statistical cards which have been forwarded to your office each month. These cards contain data relative to newly admitted patients, those who have been

transferred, died, etc. In some instances it has been quite difficult to obtain all the data necessary to make the card complete. These reasons are, I believe, obvious and the matter only is mentioned at this time to call attention to the difficulties encountered in this phase of the work.

No research work has been undertaken during the year. There has been some experimentation with Luminal in the treatment of epilepsy. The results obtained have been quite encouraging. The treatment of neuro-syphilis by the use of Salvarsan and Neo-Salvarsan has not been encouraging.

The classification of patients mentioned in the report submitted last year is still employed, though the overcrowded condition of the hospital has interfered with its being carried out completely. The adoption of this classification and the re-classification resulting therefrom has made possible the assignment of nurses and attendants where most needed without a material increase in number, notwithstanding the increase in population.

The use of hydrotherapeutic measures continues as in the past. The warm pack is, perhaps, employed more at the present time than in previous years, due to the fact that the thermostatic control of the continuous tubs has not proven satisfactory.

A complete laboratory report for the year cannot be submitted owing to the fact that the hospital has had the services of a technician during the past six months only. Previous to this time members of the staff alternated in the laboratory and the records for statistical purposes are not complete. During all of the period, however, routine examinations of urine, sputum, blood, etc., have been made.

The following surgical operations have been performed by the State surgeon:

Hernia	5	Tonsillectomy	20
Circumcision	6	Appendectomy	11
Perinorrhaphy	1	Hysterectomy	1
Cataract	1	Uterine fixation	1
Salpingectomy	5	Osteomyelitis	1
Hemorrhoids	2	Tumor of the jaw	1
Fracture of the jaw	2		

Dr. Sullivan, resident dentist, submits the following report of the work done in his department:

Amalgam fillings	711	Cement fillings	60
Cleanings	264	Extractions	710
Treatments	458	Cast inlays	11
Gold fillings	7	Synthetic porcelain	82
Plates	67	Repair of plates	38
Bridges	14	Gold crowns	29
Porcelain crowns	10	Richmond crowns	10
Repair of bridges and crowns	12		

In addition many X-ray films and plates were made and appropriate treatment instituted with material benefit to the patient.

CHANGES IN THE MEDICAL STAFF.

Dr. Milton Jacobs resigned July 1, 1920, in order to enter private practice in Elgin.

Dr. C. K. Russell entered the service July 10, 1920, and resigned November 25, 1920.

Dr. Edith M. Haralson was appointed an assistant physician October 6, 1920.

Dr. J. J. Walsh, physician, was transferred to the St. Charles School for Boys, November 1, 1920.

Dr. J. H. P. Causs was appointed an assistant physician November 9, 1920, and resigned December 24, 1920.

Dr. P. F. Gillette was granted a year's leave of absence beginning March 1, 1921.

Dr. R. F. Dowell was granted a six months' leave of absence beginning June 1, 1921.

Dr. W. J. Riley re-entered the service as an assistant physician June 3, 1921.

VOCATIONAL TRAINING FOR EX-SERVICE MEN.

Vocational training for ex-service men was inaugurated October 4, 1920. The first class consisted of twelve patients. The classes have gradually increased in number and at the present time 106 men are receiving instruction. The courses offered are varied and consist of arithmetic, geography, typewriting, bookkeeping, business English, penmanship, spelling, history, mechanical drawing, commercial art, metal work, auto mechanics and wood working.

The disorders from which many of these men are suffering are of long standing, the mental deterioration in many instances is well pronounced and for these reasons it has not been found advisable to attempt to have all of these patients enter the classes mentioned above. The director in charge has, however, organized classes among the last named, pre-vocational in character, and in a few instances it has been found possible to promote the patient to the more advanced classes.

The Federal Board of Vocational Training furnishes all the equipment and the instructors necessary for the carrying on of this work. In addition to the director, nine assistants are employed. The male psychopathic cottage has been taken over in its entirety by the ex-service men and the academic instruction mentioned above is given there. The cooperation of the representatives of the Government service has been excellent and the relationship between them and the hospital management most cordial. They are doing a good work, as is attested by the number of ex-service men who have been able to leave the hospital and to adjust themselves to outside conditions.

NEW HOSPITAL AND BUILDING FOR EX-SERVICE MEN.

The Fifty-first General Assembly appropriated \$150,000 for the erection of a building for the physically sick. This building is now in course of construction and will be completed within the next few months. The main portion of the building is two stories in height and has a

frontage of 200 feet. Extending to the rear are two wings, each one story in height, and these contain the main wards of the hospital. The building will accommodate 80 patients and have suitable quarters for sick employes. The front of the lower floor of the main building will be used entirely for clinical purposes and will contain dental offices, X-ray rooms, eye, ear, nose and throat room, minor surgical room, pharmacy and laboratory. The building is well arranged and designed, the construction is excellent and the only criticism which can be offered is the use of the tie rods in the dormitories on the first floor. These are objectionable in a building to be used for the housing of the insane and should have been omitted.

The building for ex-service men will accommodate 206 men. It is one story in height and will contain six dormitories. It is to be built of hollow concrete blocks and stuccoed on the outside. Patient labor has been and will be used in the construction of this building. Their part in the work consists in the making of the concrete blocks, excavating, and the like. The building is well planned, will be very suitable for the purpose for which it is intended, but the same criticism as in the case of the new hospital building can be offered in the use of objectionable tie rods in the dormitories.

DEPARTMENT OF RE-EDUCATION.

The work in this department has continued along the same general lines as during the past two years. Approximately three hundred patients are reached each day. The department has been handicapped to some extent by the lack of adequate quarters and because of the failure to secure the services of a chief occupational therapist to assume active charge of the department.

The department has also been greatly handicapped on account of the inability to secure the services of one capable to direct various physical activities. Some of the outdoor games and sports mentioned in the last report have been continued, but not to the extent as described at that time.

Habit training has proven its worth on those wards where the patients are unable to care for themselves. The schedules outlined in previous reports have been continued with uniformly good results.

During the winter a class in wood working was organized among patients who previously had shown no inclination to do or assist in any kind of work. This class was instructed in work of a more advanced type, they were impressed with the fact that they were doing things worth while and real progress was the consequence.

TRAINING SCHOOL FOR NURSES

Definite progress in this department cannot be recorded. Many reasons may be given and any one might be considered a satisfactory explanation for the situation being as it is. In previous years many of

the hospital graduates pursued their studies in general hospitals and by devoting a year to surgical nursing, obstetrics and diseases of children, were able to qualify and to take the examination which recognized them as registered nurses. The ruling of the Department of Education and Registration relative to entrance requirements and the fact that this hospital was no longer on the accredited list of the department, has, I believe, lessened the enthusiasm of attendants to take up the work of the training school. Again, those in training have objected to the designation of "Qualified Nurse." They have insisted that it is their just due to be considered "Graduate Nurses." I have never been able quite to understand the objection, though the nurses in question insist that the public will consider them in an entirely different light from those who have preceded them. Again, for a long time it was extremely difficult to obtain the services of any one in the capacity of an attendant, let alone one who had a real interest in further education as offered in the training school. I am glad to report, however, that this condition is subsiding and we hope that the activities of the department will again return to normal.

Last February four of our employes took the examination for "Qualified Nurse" as given by the State Civil Service Commission and passed. Their names are: Zora Huff, Mary Davis, Leona Ruth and Rose Lippold.

SOCIAL SERVICE DEPARTMENT.

The work accomplished by this department has been most satisfactory. During the month of August, 1920, the chief social service worker trained a class of eight in psychiatric social work. During the three months that followed three of these students remained at the hospital as student workers, without salary.

The need of this department is especially emphasized since so many ex-service men have been sent to this hospital for vocational training. Though the American Legion and the Red Cross have worked in conjunction with the Veterans' Bureau, many of the patients arrive without their claims having been made out and without conservators having been appointed. These claims are held up because of lack of sufficient workers to put them through properly.

An estimate of the amount of work accomplished by this department may be gained from the following statistics:

Number of investigations requested.....	240
Number of investigations completed.....	189
Number of new cases referred for supervision.....	344
Number of cases closed because of patient's recovery.....	86
Number of cases closed because of satisfactory adjutment.....	118
Number of cases under supervision.....	733

This report I consider quite satisfactory notwithstanding the fact that during the past few months the department has been without a sufficient number of trained assistants. Important after-care can at

present be accomplished only in a limited number of cases. This phase of the work is not receiving the attention deserved.

RECOMMENDATIONS.

I cannot refrain from again calling attention to the over-crowded condition of the hospital. The completion of the new hospital and the building for ex-service men will only partially relieve the situation. Since the war the admission rate has gradually increased and if economic conditions continue as they are we may expect a further increase. The present service buildings are no more than adequate for our present needs. Additional buildings will necessitate an addition to the power plant, more kitchens, and the like. To me, the only solution of the problem is the purchase of additional farm land and the development of a farm colony, as recommended in the last report.

Amusements are necessary for our patients. The Elgin State Hospital is peculiarly fortunate in having a fund for this purpose but on account of the growth of the hospital, adequate quarters are not available. The same hall used when the population of the hospital was but twelve hundred patients is still in use. A larger and better hall is, therefore, recommended.

Suitable quarters for married employees and members of the medical staff are needed. Employees are demanding, as is their right, better quarters. If competent medical officers are to be retained in the service, homelike conditions must be provided for them.

The development of the industrial life and the value attending the instituting of occupational therapy, is self evident. To carry on this phase of the work suitable quarters are essential. This question is also submitted for your consideration.

KANKAKEE STATE HOSPITAL.

EUGENE COHN, M. D., *Managing Officer.*

Following is the twenty-second biennial report covering the periods between July 1, 1918, and June 30, 1920.

I fully realize that in more than one respect the results of the recent war are being felt especially in the purchasing of many of the articles needed for the conduct of the institution, though considerable relief has already taken place and indications point towards a gradual but sure return to normal conditions. This institution, like every other of its kind, naturally had to adjust itself to the contingencies of the post war period. Considering everything, the needs of the institution were fairly well met. That we would face a deficit in our ordinary expenses was a foregone conclusion even early in the biennium. A special emergency appropriation, however, took care of this matter. Regardless of the high cost of many of the essential things needed for the patients' comfort, requisitions for these needs were at all times promptly and liberally made by the managing officer. I am pleased to report that on the whole the welfare of the patients and of the institution in general, was protected and that certain definite and marked progress in the right direction can be recorded for the two years covered in this report.

The movement of patient population in the Kankakee State Hospital has not differed a great deal from preceeding biennial periods.

Voluntary commitments, as far as opportunities permitted, were encouraged. The managing officer did not even hesitate in quite a number of cases to permit patients to enter for observation and early care, especially from the immediate neighborhood, without legal commitment, until it became evident that a commitment was actually necessary. Quite a number of the latter class recovered their health and returned home within a very short time without the embarrassment of a legal commitment.

I would recommend that certain changes in the commitment law of Illinois be made, permitting those suffering from mild mental conditions to apply directly to the institution for treatment, avoiding commitment excepting where after a reasonable period it is evident that a lengthy treatment is advisable. Some eastern states have such provisions in their laws.

The health of our people in a general way has been good. There were no epidemics. The number of deaths was the usual small per cent

considering that this institution has nearly 3,500 patients with many hopeless organic brain and senile cases present.

We are sorry to report that we had a few serious accidents in the form of suicides. The managing officer, however, believes that suicides, though very regrettable occurrences which should be avoided by every possible precaution, will occur in a place of this kind in spite of everything. The more liberal and humane care of patients, including open cottages, absence of mechanical restraint and seclusion, the free use of parole privileges and other available means to make the lives of the unfortunates more happy and endurable, have a tendency to reduce rather than increase the number of suicides, arguments to the contrary notwithstanding. It is obvious that people living in a pleasant environment are less apt to become discouraged than those who are held under severe restriction and restraint.

With the purpose in mind of making the State's charges as happy as possible, the managing officer has devoted every effort towards removing as much as a reasonable degree of safety would permit, the orthodox and severe methods of insane hospital routine and has substituted, therefore, the maxim that insane people should be surrounded as much as possible with sane environment, meaning thereby the most lenient methods possible consistent with a reasonable degree of safety. I am truly aware that in order to accomplish the things just mentioned, good judgment and reasoning on the part of all concerned having to do with the care of patients are necessary. If in spite of this reasonable care and judgment an occasional unhappy occurrence takes place, I, for one, am cheerfully willing to consider such a mishap as a justifiable, though regrettable sacrifice in order that the many may profit and derive additional comfort and happiness.

THE MEDICAL STAFF.

I am sorry to say that some of the best members of the medical staff have left and are leaving the service, seemingly because better inducements are offered them in other lines of endeavor than the State is able to offer. There is no doubt in my mind that if the State service of Illinois wishes to retain and develop a medical service of highest efficiency it must be able to offer to prospective candidates such inducements as men of proper training may rightfully expect. The living conditions, especially of married physicians, should be sufficiently pleasant to keep both the doctors and their families satisfied. I again recommend individual cottages as I have done on two previous occasions for married doctors and their families. The pay for doctors must be increased if we are to attract the right kind of timber into the service and retain the better ones now employed; and the assurance for promotion must always be held before the eyes of the worthy ones. Unless there is a future for these professional men, I feel that well trained men will seek fields of activity elsewhere.

The Medical Department of the Kankakee State Hospital has labored faithfully for the welfare of the patients. Considering the small number of trained doctors present, as much as can be hoped has been accomplished. The needs of the sick have at no time been neglected.

SURGERY.

The surgical work, as heretofore, was efficiently carried out by the medical staff of the institution, the managing officer taking a leading and active part in this work. No patient, whether a major or minor surgical operation was needed, was denied this special care. In consequence a rather large number of major operations of all kinds were successfully done with a death rate practically nil.

NURSING SERVICE.

Our training school for nurses is being conducted as faithfully as possible. It is regrettable that we are unable to obtain more young women fitted for the nursing profession. Possibly after times become more normal and attractive positions on the outside become less, available timber for the nursing profession will be more plentiful. Many of the graduates of the Kankakee State Hospital have made enviable records for themselves and are now holding responsible positions elsewhere.

The attendants' force, as usual, is a rather shifting part of the hospital population, though it is noticeable of late, since positions on the outside have become less plentiful, that desirable candidates for attendants and other grades are more easily obtained and that their services have become steadier in character. The same applies to the labor and domestic departments.

OCCUPATIONAL THERAPY.

The Occupational Therapy Department of the Kankakee State Hospital, from a small beginning, has gradually grown to a very efficient and competent department. An old abandoned power house was remodeled at a small cost into a very attractive occupational center. Quite a number of special class rooms have been organized on various wards. The personnel of the Occupational Department consists of a chief and a number of trained occupational teachers, who in turn are assisted by quite a number of specially selected attendants. At the present time some twenty-five to thirty people are devoting their entire time to occupational therapy. The results of this department are very good and the benefits derived for patients are obvious.

HYDROTHERAPEUTIC WARDS.

I am pleased to say that by remodeling some back wards in the main buildings, we have obtained hydrotherapeutic wards which are in every way suitable for their specific purpose and probably have few if any superiors anywhere. Each one of these departments is so organized

as to give the institution the best possible chance to apply this important form of treatment to cases in need of it. The managing officer, with the assistance of the supervising engineer of the State service, has been able to devise for the continuous tubs practical temperature control apparatus, which I believe, assures absolute safety against scalding.

AMUSEMENT OF PATIENTS.

The amusement of patients as heretofore has always been considered an essential part of their treatment. Such amusements as dances, band concerts, moving picture shows, amateur performances, etc., have been as liberally supplied as our means would permit.

The patients' amusement park and zoo adds a novel attraction and has steadily grown in popularity, both with the hospital people and those of the surrounding country. It certainly adds no small part to the beauty and attractiveness of our grounds.

RELIGIOUS SERVICES.

Religious services are regularly provided for the patients and clergymen of the different denominations are in charge.

CEMETERY.

The patients' cemetery, which up to recent times was an unattractive place, has been beautified, all the old graves been remounted and for each one a concrete marker has been provided making the appearance of the last resting place of these unfortunate people as attractive as possible.

PHYSICAL PLANT.

We feel that creditable advances have been made in the improvement of the physical plant of the institution. I refer especially to the remodeling of many old buildings, changing them from antiquated structures, unsanitary, badly ventilated with insufficient sunlight, vermin infested, into light, airy and homelike structures. In this way and at a very reasonable cost (using old material and patients' labor as much as possible and the regular mechanics of the institution) some fifteen or more buildings or wards have been remodeled. The managing officer has asked the legislature for an additional sum and he has every reason to believe that this sum will be granted for the continuation of this work. It might be stated here that though the improvement of the physical plant just described is of importance per se, the fundamental reason for it all goes back to the one guiding thought, namely, to make the living condition of the patients better and happier.

KITCHEN DEPARTMENTS.

The managing officer has always, no matter how expensive cost of food was, insisted that patients must be well fed, though unnecessary waste was to be avoided. The feeding of a great number of patients

presents a problem rather difficult. The employed kitchen personnel changes rather rapidly. Good cooks are hard to find. We have been fortunate, however, in having in our employ the steady services of several excellent cooks who did their best to give the most efficient service their means would permit. I realize that, as in all years gone by and probably in years to come, everlasting watchfulness will be needed in order to prevent justifiable criticism of these departments. There is always danger that certain defects and just complaints pertaining to food and its preparation will creep in, a fact which every similar institution must honestly confess. As economic conditions are coming back to normal standards with many of the prices of foodstuffs very much reduced, and with railroad deliveries more dependable, some of the difficulties which the past few years presented will no doubt gradually and to a marked degree subside.

FARM AND GARDEN DEPARTMENT.

Our farm and garden departments, considering certain unfavorable weather conditions, have made fairly good showings, granting that in this as well as in other departments of the institution improvements are always possible and desirable.

THE MECHANICAL DEPARTMENTS.

The various mechanical departments deserve a good deal of credit for their willing cooperation, especially in the remodeling of buildings. Much good has been accomplished by them and a great deal of money has been saved the State because of the efficiency of these departments. I hereby wish to express my appreciation.

GROUNDS.

The grounds of the institution during the last two years have looked very beautiful and showed excellent care by those in charge. The Kankakee State Hospital may well be proud of its grounds. Though we have done considerable work to improve some of our roads, a considerable amount of work along this line is still necessary, lack of funds preventing us from doing more than we did. The coming appropriation will give an opportunity to continue this desirable work.

THE FLORIST DEPARTMENT.

The Florist Department has produced many beautiful plants and flowers which help to improve the appearance of our grounds and to make the lives of patients more pleasant. Our yearly chrysanthemum show, which has few equals anywhere, has been given each year and is appreciated by hundreds of people.

POWER PLANT.

The power plant of this institution is an old one, composed of many antiquated parts. If it were not for the first large expense the most

economical thing to do would be to discard the old plant completely and build a new and model one using such good machinery of the old plant as may be suitable. Our boilers during severe weather are strained to a point nearly beyond safety. To relieve this situation, a new boiler is asked for and will undoubtedly be purchased. This will in a measure relieve the situation for the time being, at least, though I sincerely recommend that as soon as possible a new plant be installed.

REPAIRS.

Much ordinary repair is still needed. Many of our buildings need pointing up. Painting and tin work, as is always the case, are necessary in many places. Unfortunately the available money for repair material and the high cost of such material made only a limited amount of this work possible, though considerable has been accomplished. No doubt the new appropriation will provide more liberally and much can be done along this line during the next few years.

GARAGE.

A new garage to house the automobiles belonging to the State is needed. At the present time these vehicles are cared for or housed in an old wooden horse barn which exposes them to danger by fire. A fire-proof garage can easily be built at a very small cost by using old bricks, of which the institution has many. A special garage for the passenger machine should be built out of fire-proof material near the superintendent's residence.

PAINT AND TINNER SHOPS.

Paint and tinner shops are in the basements of the employees' quarters, constituting fire hazards. These should be removed and placed in a fire-proof building, especially constructed for this purpose. Again, old brick and old material available may be used to good advantage.

ICE PLANT.

The present ice plant of the Kankakee State Hospital is old and insufficient. A new one should be installed. We have had two failures of ice crop from the river in the recent years and had to purchase ice at an expense which would have been sufficient to cover a fair part of the cost of a new plant. I hereby again recommend that a new ice plant be installed, or a complete remodeling of the old plant.

SEWING AND CLOTHING REPAIR DEPARTMENTS.

As heretofore, a great deal of the wearing apparel for patients, bed linen, etc., is made within the institution. We were handicapped a good deal by not having sufficient material, partly because of high prices and partly because of difficulties of delivery over which we had no control. As prices of dry goods are becoming more reasonable and delivery more prompt these difficulties will gradually subside, I am sure. The sewing

room department is now in a remodeled old building. This building which, previous to remodeling, was extremely unsanitary, consisting of many small badly ventilated rooms, is now an airy, light open building where all concerned may work without endangering their health.

LAUNDRY.

Our laundry is insufficient in size and equipment. Much of its machinery is worn out and must be replaced.

FURNITURE AND FIXTURES.

Because of war conditions little if any furniture, carpets, etc., have been purchased recently. It is high time, however, that in a measure at least, we now supply these essential needs of home comfort. I am sure that the new appropriation will give us an opportunity to do this.

LIVE STOCK.

Unfortunately this institution from time to time has lost a goodly number of milch cows because of the tubercular test, making it necessary to purchase a large amount of milk from farmers and outside milk plants. It seems to me that the purchasing of milk from outsiders, in as large an institution as this, should become a thing of the past, and this institution should have sufficient healthy milch cows to cover all of its needs. It seems also that a reserve fund should be available immediately to purchase a corresponding number of cows for all those condemned by tubercular tests. I would recommend that the State Department of Agriculture give the institution a careful investigation sufficiently often to find and remove every factor that may be responsible for infected milk animals.

MODERN MILK PLANT.

It is my hope that a real, modern milk plant, equipped with everything necessary for handling milk in a sanitary fashion and keeping it properly during hot weather be installed, this to be a part of the new ice plant. At the present time we have considerable difficulty with the milk during hot weather because of our inability at times to keep it as cool as necessary. Treatment of milk by pasteurization or other recognized methods is of no value whatsoever unless such milk after receiving this treatment can be kept as cool as necessity requires. Milk, no matter how well treated, will take on germs in large numbers and ferment readily unless the cooling process is of the proper kind.

SHEEP.

We have had for a number of years, a flock of sheep browsing on our lawn and of late years have raised a considerable number of lambs within this institution. No claim is made that the raising of sheep within an institution is a money maker. I feel if the institution comes out even or with a small profit it is probably all that can be hoped. The managing

officer, however, feels that a flock of these animals while grazing on our lawns adds to the attractiveness of the place and helps to fertilize the lawns, giving also pleasant occupation to a few of our older patients.

POULTRY DEPARTMENT.

The Poultry Department is doing as well as can be expected. Many young chickens and ducks have been raised. A poultry department is never very profitable from a purely financial viewpoint, arguments to the contrary notwithstanding. My experience has been that so-called big profits on poultry within a hospital are on paper only. Nevertheless, a poultry department is a desirable adjunct to an institution for more than one reason, and especially because it gives pleasant occupation to quite a number of patients besides furnishing fresh eggs for the sick. The poultry department should not however be a money loser, even if not a money maker.

HOGS.

Many hogs are being raised and fed on the offal from the tables of the institution. Since corn is very cheap, it may be advisable to feed a certain amount of it to fatten some of the hogs. During time that corn was expensive, I have insisted, and have not changed my convictions, that hogs should be butchered not heavier than say two hundred or two hundred fifty pounds, because up to that weight the slop of the institution will be all that is necessary, excepting for breeding animals.

FARM SHEDS.

We now have an excellent farm shed built by mechanics of our own institution with patients' help which gives proper shelter to all the wagons and machinery, a necessity long needed. The upper structure of this shed was so planned as to make a wonderful granary. This improvement will require only moderate expense and should be carried out at an early date.

THE BUSINESS DEPARTMENT.

The Business Department, headed by a very efficient chief clerk, has helped the managing officer much indeed in solving many of the difficult problems which have come up during the trying times of recent years and I wish to express my appreciation.

In conclusion, I wish to say that the managing officer is thoroughly aware that without the faithful cooperation of many of the officers and employees of the institution, he could not have accomplished much. Feeling, however, that the accomplishments of the last two years have in a measure been creditable, I wish to thank, at this time, all those in Kankakee and Springfield who have assisted me. I also realize that much is yet to be done, the work is never finished, that the highest standard of efficiency in an institution of this kind lies in the honest

effort of all concerned to aim for a high goal, though knowing that that goal will probably never be reached. But the fact will always remain that efforts of this character being made by the managing officer and those working under him are bound to bring some degree of success in spite of difficulties and disappointments. The realization that our institution is created first of all for the relief of suffering mankind should instill into the minds of all concerned that our duties are sacred and our obligations many and important.

JACKSONVILLE STATE HOSPITAL.

E. L. HILL, M. D., *Managing Officer.*

The health of the Jacksonville State Hospital covering the period of this report, July 1, 1920, to June 30, 1921, has been most excellent. We have had no epidemics of any kind. We have been immune to small-pox and typhoid fever, which have raged to a greater or less extent in many hospitals in previous years. It is our custom to vaccinate each patient with vaccine and typhoid serum when received in this institution. This has contributed in no small way to our improvement in health condition. Dietary and sanitation of the institution is carefully looked after and cleanliness is strenuously carried out.

The Industrial Building, which houses 250 patients with suitable quarters for industrial work, was completed and dedicated in the past year. The new dairy barn, which houses 80 head of cattle with ample space for the storage of grain with two silos in connection for silage storage, is now under construction as well as a new tubercular cottage. This building will care for 60 patients. The walls of the main building of the Jacksonville State Hospital as well as the tin roofs have received two coats of paint and one for the roof. This painting was largely done by patient painters. Also a large number of wards have been painted and all repair work is kept up to the minute.

TRAINING SCHOOL FOR NURSES.

The Jacksonville State Hospital is on the accredited list but unfortunately since the war period, we do not have nurses taking the accredited course. A strenuous effort to secure applications for this course was made, but to no avail. Letters were written as well as circulars mailed to a number of cities in the southern and central part of the State calling attention to the fact that girls would receive \$45 per month with maintenance while taking the nurse's course and could be registered after having taken one year's course in a regular hospital where subjects which were not taught in the Jacksonville State Hospital were given.

We had twelve nurses taking the qualified nurse's course last year, but they will be unable to register because of the fact they do not have the educational requirements.

RELIGIOUS SERVICES.

Religious services, both Catholic and Protestant, are held in this institution on Sundays. Catholic mass in the morning, Protestant

services in the afternoon with Sunday School in both chapels and on the wards Sunday morning.

AMUSEMENTS.

Amusements of various kinds are carried on in the Jacksonville State Hospital for the benefit of the patients. Monday evenings at both halls dances are held. In the neighborhood of four and five hundred patients participate. Tuesday afternoons and evenings we have picture shows for all the patients. Four shows a day make it possible for all the patients who care to do so to attend. Wednesdays we have community singing in both amusement halls and in the neighborhood of eight hundred or a thousand patients participate. Thursday evenings dances in both halls similar to those on Monday evening. Friday afternoons and evenings, picture shows similar to Tuesday. Saturday afternoons and evenings, vaudeville shows are given by patient talent. A series of three or four shows are held.

This, of course, does not include games and other sports such as basketball, football, and tennis which are conducted on the lawn when weather conditions are suitable. We have a patients' band composed of 15 pieces under the direction of a blind student from the School for the Blind. They furnish music for the picture shows and other amusements and entertainments. Musicals, vaudeville and playlets are under the direction of a vocal instructor who prepares the course and trains the patients in performing their parts.

OCCUPATIONAL THERAPY AND INDUSTRIAL TRAINING.

The patients of the Jacksonville State Hospital are divided into five groups: Receiving or observation group, occupational group, vocational, educational and industrial group, infirmary group and hospital group. In the occupational therapy group we have in the neighborhood of five hundred patients. In this grade they receive the application of occupational therapy and habit training. Occupational therapy is divided into four different grades: A, B, C, and D. "D" represents the habit training. As advancements are made by patients they are placed in different grades and are transferred to the vocational or educational or industrial groups when their behavior and adjustment warrants it. The number of patients occupied in the various centers average about 1,600 to 1,800.

A record is carefully kept of the advancement which materially helps the staff members in deciding what action to take on the application received from relatives to take the patient home. We are such firm believers and so thoroughly convinced of the benefit the patients receive from this work that we have as our slogan: "A job for every patient."

SOCIAL SERVICE WORK.

The Jacksonville State Hospital has two social service workers. Their addition to the staff has been an asset and through them we are able to secure valued information about the patient prior to the admission to this institution. We also find through their efforts and cooperation, we have been able to place more patients out on parole and to decrease the number of returns from parole.

Community clinics are held in various centers of population, namely, Jacksonville, Quincy, Springfield, Decatur and Carlinville. Patients who are out on parole and live in the vicinity where clinics are held are asked to report to these clinics in order that the doctor in charge of the clinic as well as the welfare worker will be able to examine and interview them relative to their adjustment outside of the institution while out on parole. This has aided us very materially.

Patients who are delinquent, backward or deficient as well as border line cases may be referred to the clinic and examined by the physician who has charge of this clinical work and recommendations are made by him. No treatment, however, is given.

DAIRY HERD.

The Jacksonville State Hospital is now milking 65 head of cows. The amount of milk averages around sixteen hundred pounds daily. We have 40 head of two-year-old heifers with which we expect to increase and replenish the herd. We hope to increase our herd until we will be able to produce a maximum of twenty-five hundred pounds.

FARMING.

The hospital is farming in the neighborhood of nine hundred acres, all of which is rented except two hundred acres. For the past two years, no feed of any kind has been purchased for the hospital's stock and practically all the pork used in the institution was raised and butchered on the farm.

The garden consists of one hundred and twenty acres. Last year twenty-nine thousand gallons of garden products were canned. This included corn, beans, rhubarb, tomatoes, strawberries, blackberries, grapes as well as many other products.

CHANGES IN MEDICAL STAFF.

Doctors Leaving the Service.

Dr. C. M. Fuson left service July 15, 1920. Dr. George C. Stimpson left service September 8, 1920. Dr. W. G. Murray left service September 17, 1920. Dr. E. W. Zook transferred to Peoria December 1, 1920. Stuart Gross Smith, assistant bacteriologist, left service September 15, 1921, to enter school.

New Physicians.

Dr. O. L. Asher began services June 4, 1920. Dr. F. J. Smith began services November 3, 1920. Dr. G. N. Lucas began services January 7, 1920. Stuart Gross Smith began services July 29, 1920.

Present Members of the Staff.

Present members of the staff are: Dr. E. L. Hill, managing officer, Dr. I. F. Freemmel, assistant managing officer, Dr. T. G. McLin, Dr. E. L. Abbott, Dr. O. L. Asher, Dr. F. J. Smith, Dr. G. N. Lucas and Dr. J. D. Smith, dentist.

ANNA STATE HOSPITAL.

CYRUS H. ANDERSON, M. D., *Managing Officer.*

Desired progress was not fully realized at the Anna State Hospital during the fiscal year ending June 30, 1921, because of the certainty of an accumulating deficit.

Many helpful changes such as remodeling and repainting buildings have been effected. The most notable building enterprise undertaken during this period was the erection of a new nurses' home. We hope to be able to complete and furnish this building by the first of the ensuing year.

A social service department was organized during this period and was found to be helpful both to the medical staff and the population of the institution. Better case records were secured, more patients were paroled and better supervision were given those on parole than was formerly possible.

Occupational therapy received a new birth during this period. Through habit training the number of functionally untidy patients was greatly reduced. Patients who formerly had been destructive both to furniture and clothing were taught habits of order and neatness.

An industrial department was organized and is now doing good work. The furniture for the new nurses' home is being manufactured in the industrial shop. One thousand windows of the institution are being screened with galvanized fly screens.

MEDICAL SERVICE.

We have been unable to maintain a full staff of medical officers during this period because capable physicians have not been available.

The following changes in the medical staff have occurred:

Dr. L. G. Alexander, assistant physician, entered the service November 1, 1920, and resigned April 21, 1921.

Dr. W. H. Brann, assistant physician, entered the service September 11, 1920, and resigned October 31, 1920.

Dr. D. E. Singleton, assistant physician, resigned July 25, 1921, to enter the Public Health Service.

Dr. H. O. Witten, assistant physician, entered the service August 7, 1920, and resigned September 28, 1920, to enter the Public Health Service.

Dr. E. W. Zook, junior assistant physician, was transferred to the Jacksonville State Hospital September 10, 1920.

No changes occurred in the general staff.

NURSING SERVICE.

Conditions have made it difficult to maintain an adequate force of trained nurses. Many of the nurses who left the institution during the war period failed to return and we have found it difficult to fill the vacancies from other sources. The nurses' training school has been organized but the classes are not as large as they should be owing to the fact that so few of our employees can show the preliminary education necessary to registration. The personnel of the attendant force has been fairly well maintained.

AGRICULTURE.

The character of the soil is poorly adapted to grain farming. The present State Farm is only suitable for orchards, pastures, gardening, etc. It is recommended that the next General Assembly purchase 300 acres of land in the Mississippi bottoms and enough additional funds to erect buildings for a farm colony, dairy barns, etc. During the late summer and autumn of 1920 the institution had a detail of patients in the Mississippi bottoms baling hay and straw, gathering corn and otherwise assisting in the harvesting of the crops. Compensation for this work was taken in a toll of the crop harvested. The products returned to the institution in this way were worth approximately \$10,000 if estimated at market values.

During the preceding biennium more than half our dairy herd was slaughtered because they were infected with tuberculosis, consequently our herd has not produced enough milk to meet our demand. The Fifty-second General Assembly appropriated enough funds to purchase 50 head of cattle. This will afford great relief from this particular want.

The poultry industry has been greatly enlarged but further extension will render the erection of additional buildings necessary.

Ideal conditions do not exist in any department of the institution but we believe that we are justified in claiming that substantial progress has been made under conditions that have been unfavorable in many respects.

WATERTOWN STATE HOSPITAL.

J. H. ELLINGSWORTH, M. D., *Managing Officer.*

No epidemics have appeared during the report period. In July, 1920, one employe developed measles but no contacts resulted. Three cases of typhoid developed in October, 1920. One case was that of a patient returned from escape and the incubation period indicated that the disease was contracted outside of the hospital. The two other cases developed in the institution, the source of the infection being unexplained. One employe developed mumps with one contact case, a patient. During the year all new employes were compelled to be vaccinated and all patients admitted were vaccinated against smallpox and in addition all Wassermann tests performed on blood.

THERAPEUTIC.

All epileptics have been placed on Luminal and it is the unanimous opinion of both patients and staff that much good has been done. The expense and work have been well paid by good results.

Several major emergency operations have been performed and many minor operations.

Hydrotherapeutic department has been rearranged with a minimum of expense and both sexes can be treated simultaneously and for twenty-four hours if necessary.

A surgical dressing room has been established in the main building.

OCCUPATIONAL THERAPY.

An occupational therapy department was opened in the C building for the acute mental service and convalescent patients. Occupational therapy has been successfully conducted for all idle patients except on restless and habit training wards where there has been some curtailment owing to a shortage of space in which to conduct craft work. A separate playground was established for the habit training department and during 1920 this has been in constant use. The restless wards were taken daily to the playground.

As a whole, occupational therapy has demonstrated its value as a tranquilizing agent for many excitable cases, a stimulation for the indifferent and a source of unbounded pleasure for the more intelligent and alert.

PATHOLOGICAL.

Our laboratory has been in active operation since October. All clinical laboratory procedures have been carried out with the exception of the Wassermann tests and bacteriological culture work.

STAFF.

In addition to the managing officer and assistant managing officer, the medical staff consists of five physicians, three seniors and two juniors.

NURSING SERVICE.

The nursing department at this institution was greatly handicapped during the first portion of this fiscal year because of the shortage of male attendants. More recently, however, due to business depression, we have been able to secure plenty of male employees and of a better type than were obtainable before.

During the period ending June 30, 1921, 105 attendants completed the attendants' preliminary course and each received a certificate. Four nurses completed the course for Qualified Nurse and are eligible to take the Civil Service examination.

The training-school curriculum was thoroughly revised in September, 1920, and this school again placed on the accredited list.

There seems to be a general desire on the part of the nurses and attendants to cooperate and do everything in their power toward the betterment of the patients.

AMUSEMENTS AND RELIGIOUS SERVICES.

Weekly dances and picture shows were given except during the extremely warm weather. An occasional entertainment given by local talent was greatly appreciated.

Protestant and Catholic services were held each Sunday.

DOMESTIC SERVICE.

One of the most important additions to this division was the erection of a new kitchen which is expected to be ready for occupancy in a very short time.

INDUSTRIES.

We have two industrial foremen and one forewoman. Under one foreman's supervision the tailoring department manufactures outer clothing for men, caps, etc., repairs shoes, and presses clothing. Mattresses, pillows, rugs, brooms and many other articles used in the institution are manufactured. Another foreman does repair work on furniture and manufactures some articles of furniture, thus saving many articles which otherwise would have to be discarded. The forewoman has the sewing and mending rooms and manufactures women's clothing. A number of patients are employed in these departments.

A tunnel to the industrial building has been constructed, a new roof has been placed on H1, ornamental lamp posts placed about the grounds and cement benches in the green house, also many other minor repairs and improvements made.

The water situation at this institution has been a matter of considerable concern during this period and a domestic service pump and air compressor have been placed in the power house, which have greatly relieved conditions.

Roofs on seven buildings have been painted and the interior of a number of cottages painted and decorated. All of the wards in the main building have been painted and employes' quarters in the main building have been opened and painted and decorated. Numerous floors have been varnished, beds enameled, screens repaired and painted, furniture varnished, lamp posts painted, also lawn benches and signs painted.

FARM AND GARDEN.

Our farm has produced a large quantity of excellent garden truck sufficient to meet the needs of the institution during the summer months.

We have raised considerable stock and poultry and our dairy herd has supplied part of the institution milk requirements.

PEORIA STATE HOSPITAL.

RALPH A. GOODNER, M. D., *Managing Officer.*

The movement of population during the year ending June 30, 1921, is shown in the appended report. It does not vary greatly from previous reports. The abuse of the voluntary form of commitment has continued, but the number of patients who should not be so committed is lessening instead of, as before, increasing. This is due to the accumulating experience of public officials with the mistakes of the past. Properly used, I decidedly approve voluntary commitments.

To lessen escapes we have closed a few more cottages. This has been done simply and easily, by locking the main entrance doors and placing a few stops on windows to limit the height of raising same and has been very successful and at the same time practically without cost or approach to prison-like effect of bars or screens. As there are many who will escape if given ground paroles, but do not from a locked cottage we now do not have to place a returned escape back on an open cottage where he could repeat. The large number of seniles and paretics admitted accounts largely for our seemingly large death rate. Chicago State Hospital transferred one hundred patients. No deportations. The general health of patients and employees has been excellent.

MEDICAL SERVICE.

During the annual period just ended, the medical work has been conducted efficiently and faithfully.

In the last report reference was made to the efficiency system. This has been strictly adhered to and at the time of this writing every patient in this institution has been re-examined and findings made a matter of record.

During the year many surgical operations have been performed, both on patients and employees. The results were quite satisfactory and no deaths recorded.

On March 1, 1921, a social service worker was added to our personnel. Much valuable information has been obtained by her for our records and it is our opinion that much good has been accomplished in the matter of paroles and the after-care of the paroled.

Our X-ray equipment has been extended and we are now doing considerable work in this field. The laboratory is in charge of a competent man and in the past twelve months 1,944 tests and analysis were made.

Diseases of the eye, ear, nose and throat have been given special

attention, Dr. D. L. Fish being in charge of this department. Clinics are held three times each week with an average daily attendance of eighteen to twenty patients.

Staff meetings are held daily so far as there is available material. They are presided over by the assistant managing officer and are attended by all members of the medical staff. Each newly admitted patient is placed according to sex in the male or female receiving cottage. Each receives a complete physical examination, including special attention to the nervous system. Wassermann tests of the blood are done as a routine measure in every case; Wassermann, Noguchi, Nome-Appelt tests and cell counts are performed in all cases showing positive blood or physical or mental findings suggesting the presence of para-luetic disease. A complete mental examination is made of each admission. Upon completion of the clinical history each case is presented at staff meeting. The patient is not present during the reading of the history, but is later brought in, observed and questioned by the staff and given an opportunity to make remarks or ask questions as they desire. After the patient leaves the room free discussions on the part of individual staff members is encouraged and the diagnosis arrived at is based upon the opinions of the entire staff. Where doubt exists because of cases not being clear-cut or because of insufficient data further investigations are made and the case re-presented.

The prognosis and recommendations regarding parole, special needs, as supervision of dangerous tendencies and homicidal and suicidal inclinations are also taken up and treatment outlined.

When requests are received for parole, cases are again presented before the staff, especially if doubt exists as to whether or not the patient should be allowed to leave the hospital.

PREVENTION OF INSANITY.

In previous reports I have urged more attention upon the State's part to the subject of prevention of insanity and do so again, from a sense of duty and because I believe so intensely that it can be usefully and practically done.

We know a large percentage of insanity is acquirable and preventable. Shall the State's duty end with the treatment and control? The State's welfare service holds a two-fold relation and responsibility to her citizenship. The duty of care and treatment is generally accepted and practiced, but very little, if anything, is done towards guidance into practical methods of prevention. Insanity has been called an end-product. The processes may be long or short and include one, two or more generations and are based upon a syphilitic infection, an alcoholic degeneration, trauma, an auto-intoxication, or whatnot. Yet whatever it may be must be determined and given publicity.

In the light of recent investigations, the elements influential in original modifying the organism are syphilis, alcoholism and drug habits. This view of causation does not by any means make clear the origin of all mental defectives, but it includes the majority and furnishes abundant suggestions for prevention. The State should take the lead and who should and can better assist and suggest than the men and women engaged in State service? Whose teachings and advice would carry greater weight or attract the attention and interest of the public more? Who can better afford to carry the expense than the State?

The field of opportunity in prevention is broad and inviting and scientific knowledge gathered from our wards and laboratories through well-chosen and sane channels of social service can be disseminated to the families and individuals.

NURSING SERVICE.

We are again accredited by the Department of Registration and Education, and are meeting their requirements. We are affiliated with the Illinois Training School and give a three years' course of training here, with the intermediate year in affiliation. During the year, three nurses completed the first year and the prospects for a beginning junior class are very good.

Five nurses completed the training and successfully passed necessary examinations for qualified nurse. This will be the last class for qualified nurse.

Two attendants sent from other hospitals completed the course in hydrotherapy. Three of our graduates took post graduate training in the Illinois Training School.

Three courses of training have been given for attendants, fifty-three completing the course.

While we have needed more graduate nurses, applications for attendant have been unusually numerous. The material now offering is more promising and permanent.

While our class is small for the accredited training school, it promises a high standard of efficiency. Our classes having been discontinued several years makes it hard to get organized and started. We hope and will strive to have a real training school again.

COMMUNITY SERVICE.

We have tried to be neighborly and helpful to this community and I believe we can truthfully claim we have succeeded. The Oak Grove district school house burned last December and we vacated the industrial cottage for school service, which nicely and comfortably cared for the children of this district the balance of the school year. Had we not done this, almost one hundred children would have been deprived of school advantages or greatly inconvenienced.

We have taken care of all emergency surgical demands both ambulatory and hospital. We have taken care of sick calls when no other medical help was available. Many consultations have been held concerning non-committed patients and everything has been without charge. Our amusement hall has been given gratis time and again for public use and to promote charitable and civic betterment purposes. Judging from expressions and letters received, our cooperation has been appreciated.

FARM ACTIVITIES.

The policy for growing crops is to work into the corn and alfalfa combination with perhaps some oats and potatoes. This combination, due to the small size of the farm, is perhaps the most profitable and the one which was recommended by our experiment station several years ago. Our twenty-nine-acre field of alfalfa has this year yielded 150 tons. This is on rolling yellow clay. It has done so well that thirty-two acres more have been sown this season and it now looks promising.

Oats yielded fifty-five bushels per acre, which was the top in this vicinity. Potatoes yielded eighty-three bushels per acre, which was good, considering the exceedingly dry season.

We are replacing all tuberculous cattle with clean stock. From our dairy herd of 120 head we are producing sufficient milk for our needs. We are more successful than ever before in producing pork and are able very frequently to give the patients and employees fresh pork, which is much appreciated. At present we have on hand 308 hogs of all sizes. We are trading labor when and where we can, taking something useful in return. We have gotten most of our straw this year through baling for our neighbors. We are following the advice and instructions of our farm, dairy and garden consultant and expect to make a number of physical improvements as well as others, under his able direction.

The past year we have produced in money value as follows:

Beef	\$ 720.90	Milk	\$14,325.50
Veal	413.35	Poultry and eggs.....	710.90
Pork	2,883.84	Farm crops	7,555.21

GARDEN.

Garden improvements were as follows:

One ditch eighty rods long, twelve feet wide at the top, eight feet wide at the bottom and four feet deep. The dirt which was taken from this ditch was used for filling up low places on the north-west forty acres, which reclaimed three acres. One levee eighty rods long, eighteen feet wide at the bottom, ten feet wide at the top and six feet high, was made to keep the back water of the Illinois River from overflowing the north-east forty acres at an ordinary rise in the river and will protect this land from a fifteen-foot rise.

The garden produced: Thirteen thousand four hundred fifty-eight dozen radishes, 4,635 dozen rhubarb, 68,369 dozen green onions, 2,686

dozen asparagus, 12,000 dozen sweet corn, 747 bushels lettuce, 200 bushels spinach, 442 bushels swiss chard, 1,132 bushels beets, 700 bushels parsnips, 973 bushels carrots, 2,625 bushels tomatoes, 213 bushels Irish potatoes, 165 bushels sweet potatoes, 926 bushels green beans, 29 bushels turnips, 237 bushels sweet peppers, 218 bushels endive, 51 bushels cucumbers, 67 bushels kohlrabi, 48,500 pounds cabbage, 108 pounds cauliflower, 6,700 hubbard squash, 500 pumpkins.

ENGINEERING AND MECHANICAL DEPARTMENTS.

During the past year the boilers and equipment of the power plant have been operated in a most efficient manner. Changes and adjustments have been made and our consumption of coal was approximately 13,000 tons as compared to an average consumption for the three previous years of 17,091 tons. Our hot water heaters were connected in series, making it possible to heat sufficient water with exhaust steam to carry our summer load now with one boiler. Much exposed piping has been covered. Repairs and necessary improvements to keep buildings and plants from deterioration have been made. Concrete floors and walks have been laid, concrete blocks and grave headstones made. The carpentry, plumbing, masonry and painting departments kept busy and patient labor utilized as helpers to a very large extent. Sheet metal and roofing has been done by contract.

EMPLOYMENT OF PATIENTS.

The continued and renewed interest in the employment of patients under treatment and care in the State hospitals of this State in occupational treatment designed to create interest in work and also to re-educate personalities, etc., is a marked step in the campaign for improved hospital service, aside from the economical benefits, and is second only in importance to the strictly medical work and directly accessory thereto. I feel confident that useful and productive labor is more general among our patients than ever before, although there is still room for progress in that direction and, as time and opportunity arise, it will be amplified. The patients are employed in practically all the institution's industries. The sewing rooms employs 35 to 40 women patients and one employee.

In the tailoring department woolen and khaki trousers, duck coats, khaki storm coats, lined with discarded blanket material are made. We also have three weaving machines making rag rugs and carpets and shoe repairing departments here employing patients, supervised by one employee.

The gardener employs 55 and the farm 50 male patients. Many others, male and female, are employed in the laundry, kitchen, dining rooms, boiler and engine rooms, coal detail, painting, carpentry, etc. Counting the patients employed in a field of activity, that is, labor saving and useful and more or less specialized, that engages the patient

more or less during a reasonable number of a patient's daily working hours, we total 781 patients employed.

This number is aside from the patients engaged in cottages and wards doing chores, some domestic work, running rubbers and food carts, working at odd times on details and ward gardens. If all these partially employed were credited, it would roughly approximate two-thirds of our patient population.

AMUSEMENTS.

It is the duty of any institution, whose object is the care of the mentally afflicted, to surround them during their leisure hours with amusements and entertainments that will awaken in them an interest foreign to their psychological states.

The usual weekly dance and picture show have been given. Much is made of Christmas week entertainment. The usual program was followed. Fourth of July was fittingly celebrated on our lawns with music, refreshments, games and contests and most thoroughly enjoyed by all.

We were favored with concerts during the year by the Madison Theatre Symphony Orchestra of 25 pieces, the Orchestra and Glee Club, Amateur Musical Union, Elks' Minstrels and Research Club, all without charge. We are enlisting volunteer talent for amusement purposes as never before. Magazines and periodicals are being freely contributed by different organizations of Peoria.

RELIGIOUS SERVICES.

The ministers of the different denominations of Peoria supply our pulpit—Catholic services each Sunday morning and Protestant and Jewish in the afternoon.

RESIDENT OFFICERS.

Ralph A. Goodner, M. D., managing officer.
C. C. Atherton, M. D., assistant managing officer.
Drury L. Fish, M. D., senior assistant physician.
Walter C. Cook, M. D., senior assistant physician.
H. E. Marselus, M. D., senior assistant physician.
Ione Pinney, M. D., senior assistant physician.
E. W. Zook, M. D., senior assistant physician.
P. L. Schroeder, M. D., senior assistant physician.
J. Marion McNaughton, R. N., chief nurse.
D. H. Baldwin, D. D. S., dentist.
J. R. Conway, chief clerk.

HEADS OF DEPARTMENTS.

J. L. Densch, chief engineer.
L. A. Snow, farmer.
Ida Zeigler, dietitian.
Lucille Dailey Senay, social service worker.
Frances Justice, matron.

CHESTER STATE HOSPITAL.

FRANK A. STUBBLEFIELD, *Managing Officer.*

On June 30, 1921, patients in the hospital numbered 193, being eight more than upon the corresponding date of the previous year. The average population for the year was 186.31 greater than that of the preceeding year. During the year 46 patients were admitted to the institution. Of these 10 were received from the Southern Illinois Penitentiary, 9 from the Illinois State Penitentiary at Joliet, 4 from the State Reformatory at Pontiac, 2 each from the Elgin, Watertown, Jacksonville and Peoria State Hospitals and one from the State Hospital at Dunning. Nine were received on mittimus from Cook County and one each from Hardin, Piatt, DeWitt and Rock Island Counties.

During the period 7 patients were transferred to the Jacksonville State Hospital, 7 to the Anna State Hospital, 6 to the Penitentiary at Joliet and 2 to the Southern Illinois Penitentiary. Three were released and 5 escaped. There were 8 deaths during the year.

The general health of the patients has been good this year and we have had no serious accidents. All patients have been vaccinated for smallpox. There have been no epidemics of contagious disease except one of influenza. No deaths resulted.

Inmate labor has been employed in all possible ways. Patients operate the dairy, laundry and mending rooms, prepare and serve the food, help in the mechanical department and do other work about the grounds.

Ten acres adjoining the hospital grounds was leased this spring and operated as a truck garden during the summer months by the patients. We were handicapped owing to an extremely dry season and the fact that the soil was not properly fertilized during the preceding fall. Nevertheless we succeeded in raising a quantity of fresh vegetables and in giving a number of patients the benefit of outdoor work.

Our herd of 32 Holstein dairy cows is in excellent condition. It was recently tested for tuberculosis and found entirely free from this disease. The dairy barn has been repainted. A number of hogs have been purchased which, with the increase, can easily be maintained on the waste from the institution. We have raised some five hundred chickens which will furnish meals for the patients on holidays throughout the year.

A concrete retaining wall three hundred feet in length is in process of construction on the edge of the bluff just north of the main building.

This wall was made necessary by the fact that the ground on this side of the building was gradually slipping and had already broken away to within thirty feet of the north wing. This wall when completed will obviate this difficulty and should be finished as soon as possible. It is about one-third completed at present.

We have \$5,000 appropriated for the installation of new plumbing throughout the building. The old plumbing is in bad shape and is in most cases beyond repair.

We intend to paint the interior of the main building during the ensuing year, using patient labor as much as possible.

We have added and expect to add a large number of volumes to our library so that the patients will be furnished with adequate reading matter at all times.

We expect to hold picture shows at least once weekly which all can attend, using the same program given at the opera house.

Occupational therapy will be introduced in so far as is practicable.

The proposed filtering plant at the prison, for which there is an appropriation, should be completed in the near future. At present we depend on cisterns for our drinking water and upon the prison for water for all other purposes. In case of a drought we run dangerously near a water famine as regards the cistern supply and the annual loss occasioned by muddy water pumped direct from the river, to clothing, bed linen, pipes and valves is great. Our water is seldom fit for bathing or laundry purposes.

At present we are overcrowded and the fact that we have only eighty cells with a population varying from 190 to 200 makes it necessary to sleep many cases in dormitories which we would not otherwise do. This greatly increases the danger of escapes.

CONCLUSION.

Judge Jenkins, Director of the Department of Public Welfare, has been most assiduous in his attention and untiring in his efforts in behalf of this institution and it has resulted in our patients being better fed and better clothed and in a greater improvement of conditions in every way than ever before.

John L. Whitman, superintendent of prisons, has visited us often and we have had the benefit of his ripe experience.

CHICAGO STATE HOSPITAL.

DANIEL D. COFFEY, M. D., *Managing Officer.*

During the year ending June 30, 1921, one of the most difficult problems at the State hospital has been the increase in the number of patients. On July 1, 1920, our census showed 3,192 present. Of this number 1,700 were males and 1,492 females. On June 30, 1921, we had registered as present on our roll 3,507—1,859 males and 1,648 females.

MOVEMENT OF POPULATION—JULY 1, 1920 TO JUNE 30, 1921.

	Male.	Female.	Total.
Present at beginning of period.....	1,700	1,492	3,192
Absent at beginning of period with leave.....	110	144	254
Absent at beginning of period without leave.....	88	5	73
Admitted new during the period.....	1,082	733	1,815
Readmitted during the period.....	213	107	320
Total.....	3,173	2,481	5,654
Discharged from institution during period.....	333	87	420
Discharged while on parole during period.....	337	376	713
Died during period.....	315	194	509
Dropped from roll during period.....	127	11	138
Absent at end of period with leave.....	146	164	310
Absent at end of period without leave.....	56	1	57
Present at end of period.....	1,859	1,648	3,507
Total.....	3,173	2,481	5,654
Paroled during period.....	624	593	1,217
Escaped during period.....	347	53	400

This increase in our population is gradually taxing our housing conditions. Notwithstanding the overcrowding, the health of the patient body and that of the employees has been remarkably good. No serious illnesses or epidemics to any extent have had to be combatted.

During the winter of 1920 and 1921 several patients and employees showed laboratory diagnosis of diphtheria, but without clinical symptoms. All the cases were isolated and in a few months all trace of diphtheria was stamped out. It is a general rule that all cases complaining of sore throat must be cultured, the inoculated cultured material being sent to the laboratory connected with the Department of Health, Chicago, for incubation and examination. Reports are received by telephone within twelve hours, so immediate attention may be given when indicated.

During the period covered, 1,815 new admissions were recorded, 1,082 males and 733 females. Besides this there were returned to the hospital as readmissions, 320, of which 213 were males and 107 females.

During this period a total of 420 were discharged directly from the hospital, 333 males and 87 females. Seven hundred thirteen, 337 males and 376 females, were discharged during the period while on parole. The deaths number 509—315 males and 194 females.

Escapes continue, notwithstanding constant vigilance on the part of all employees. Escapes are greatly aided by the fact that a public road passes through the hospital grounds.

At the end of the period, only 57 were recorded as absent without leave. Only one female was among the number of those so absent.

SOCIAL SERVICE AND OUT-PATIENT CLINICS.

Through the department of social service our parole number has been greatly increased. A total of 1,217—624 males and 593 females, were permitted to return to their homes. All paroles must go through this department. They are registered and each is assigned to a field visitor to follow up. As many as possible are requested to report at one of the out-patient clinics. These clinics are located in different parts of the city, so the paroled patient and his relatives will not be taxed for time when requested to report.

Each clinic is in charge of a staff physician and a social service worker. A report of the patients' activities and general condition, mental and physical, is made to the managing officer and a record of such activities is always on file.

Through this system a close touch is kept on the patient during his period of parole. Not only the patient is helped but the relatives are many times saved the extra expense of court trials by having the patients given new paroles.

The institution authorities gain a vast amount of information they would not otherwise obtain.

PHYSICAL CULTURE AND OCCUPATIONAL THERAPY.

In January, 1921, the reconstruction of the old boiler house, formerly used by the county was completed, so that now the Chicago State Hospital has the only institutional gymnasium in this country.

In this building classes are conducted daily from 9 a. m. until 4:30 p. m. An experienced physical director and assistant is in charge of these classes.

The setting up exercises with games, such as volley ball and indoor baseball constitute the instructions for men, while the women, in addition, are given folk dancing and gymnastics appropriate to their sex.

All cases taking gymnasium work go only under the instruction of a staff physician. It is his duty to prescribe what patients shall go and the form of exercises.

A class spends one hour each in the gymnasium, as per schedule arranged by the director.

The gymnasium work, together with habit training and occupational therapy, has aided many cases who otherwise would be compelled to spend many idle hours absorbed in their own shut-in personalities. Occupational therapy continues to reclaim many of the more deteriorated cases.

The system of beginning instructions on the diagnostic services under the advice of a staff physician continues. No case enters the class that has not been examined and passed upon by the staff. A prescription describing the kind of work, number of hours, and when report of progress is to be made accompanies each patient upon entering the class. The prescription is given to the director of occupational therapy.

A careful record of each case is kept by the occupational aid and these reports are turned over to the director of the department. This record is filed with the patient's mental and physical examination, thus becoming part of the history.

Some 1,593 patients, 593 men and 1,000 women, have passed through the department during the year under consideration.

In the habit training classes much good has been accomplished. We no longer talk of untidy wards. This result is shown by the decrease of soiled bed linen going through the laundry. The monthly report to the alienist of the department, for June, 1921, shows only 146 functional cases, 81 men and 60 women, were reported as careless in habits. Of the organic type a total of 115 cases were reported, 61 men and 54 women.

NURSING SERVICE.

The nursing situation has not been so acute as the year previous; still there is much room for improvement. The general restlessness and dissatisfaction of the post-bellum days still remains with us. The turnover is not so great as the previous year. The quality of those applying for the position of attendant has not improved. While remuneration is more than it was previous to the war it does not induce a higher type of individual to seek employment in this line of work.

The housing conditions for employees must be improved by providing suitable quarters for single men and married couples before much can be expected along this line.

A compulsory course of three months' training is given for attendants in order that the rudiments of hospital care may be brought to their notice.

No school of training for nurses has been maintained—partly because of the rapid turnover in the attendant body and partly due to the fact that very few have the necessary requirements to take up the work.

The school of psychiatric nursing continues to give an intensive psychiatric training. During this period 86 affiliated nurses have been given diplomas. These girls come to us from general hospitals in vari-

ous parts of the country. Many of them have had advantage of a college training and all are high school graduates.

MEDICAL SERVICE.

The medical service has been greatly crippled by the withdrawal of some of our most experienced men.

Two doctors, R. H. Rea and D. D. Campbell entered the United States Public Health Service. Dr. George W. Schelm transferred his activities to the War Veterans' Bureau, and Dr. Robert B. Kershaw entered the service of the State of California.

The places of these men were filled by new and inexperienced men, but all of excellent medical training. It requires some six months to train a medical officer in hospital work, before he or she is adjusted to the routine. At the end of the period reported the medical conditions are well under control. All examinations are up to date and the clinical records are in good condition.

FARM.

The farm activities have been greatly held back by the illness of Mr. August Gertz who has been in charge for a number of years. On May 31, 1921, he was relieved from his sufferings by death. Mr. Edward Kelley was given the place as farm manager. Owing to his general good health and youth, better results are looked for in this department.

MECHANICAL DEPARTMENT.

In the mechanical department many changes have taken place in equipment, but there are still opportunities for improvement. The ice machine is antiquated. During the hot summer months its capacity is overtaxed and frequently a break comes. At these times our meals must be handled quickly to prevent spoiling. Greater quantities of ice must be purchased to hold over the time. A new plant both for manufacture and for refrigeration purposes is very much needed.

TUBERCULAR PATIENTS.

The tubercular patients are still cared for on two wards, B1 and B4 of the hospital building. A separate pavilion for these unfortunate patients remains one of our greatest needs.

PHYSICAL IMPROVEMENTS.

The conditions at the Annex Building have been greatly improved by the laying of new floors and improving the heating system, so during the winter months the patients will be more comfortable.

General hospital conditions during the past year have been keeping pace with the reconstruction turnover taking place the country over. With the improved conditions outside, the results will be felt by our resident body, so in the future we are looking to improvement in all the departments.

In conclusion I wish to thank all employees who have aided to bridge over the difficulties, during the beginning of the reconstruction period.

To the Department of Public Welfare, I wish to express my appreciation for the friendly cooperative spirit, with which it has assisted and sustained the management.

ALTON STATE HOSPITAL.

GEORGE A. ZELLER, M. D., *Managing Officer.*

The fiscal year just closed was an uneventful one in the history of this institution. No great calamity visited us nor was there destruction by fire or the elements. It was, rather, a year of steady and unimpeded progress, such as marks an institution after its population has reached the limit of available accommodations.

NEW BUILDINGS.

It was hoped that the half million dollars appropriated by the legislature of 1919 would place at our disposal at least ten new buildings and that our population would not only be increased but that the increased capacity would materially add to the comfort of those already there. It appeared, however, that the appropriation became available just when the cost of building operations had reached their peak. The department then decided to undertake the erection of the buildings independent of contractors, using inmate labor, largely. Later it was decided to let the work by contract, the bidder to take into consideration the material on hand.

As a result it became necessary to limit the number of buildings to one hospital for men and women, one infirmary for men, two cottages for men and two for women and two extensive additions to the general kitchen for dining room purposes. The hospital is the last word in such structures and the cottages and infirmaries, all one story buildings, have realized an ideal long entertained by advanced thinkers in this field. These buildings will be under roof before winter and next year promises to be an active one in the life of the institution and its population will practically be doubled. It might be well to repeat that the rated capacity of this institution is 208 patients, but that it accommodates, without undue crowding 750. That this capacity is required even for our limited territory is shown by the fact that nearly every bed was occupied throughout the entire year, as shown by the following statistics:

	Men.	Women.	Total.
Present July 1, 1920.....	248	364	712
Average daily population for year ending June 30, 1920.....	342	361	703
Admitted during year ending June 30, 1920.....	164	78	242
Admitted during year ending June, 30 1921.....	221	85	306
Discharged.....	95	51	146
Died.....	41	29	70
Total present July 1, 1921.....	387	359	746
Average daily population for year, ending June 30, 1921.....	356	356	712

Our greatest drawback has always been the lack of a competent farm manager—one with the ability to till the available ground and the vision to reclaim and restore this almost exhausted soil. Fortunately, the new farm and dairy consultant, Mr. McKinstry, took the matter in hand and laid out a program that even in this year's crop showed a decided improvement.

The dairy herd continued to thrive and for the second time in the year emerged from a tuberculin test without a single animal reacting. This in a herd of 140 was an unusual experience in Illinois. Thirty-five fine young cows were sent to the State Farm at Vandalia to stock that new institution.

The farm colonies, of which mention was made in a previous report, have realized our fullest expectations and have won the unqualified approval of all visitors. There are now such colonies, each accommodating 16 patients.

It may seem a bit strange to dwell so much on the agricultural side of a State hospital's work, but this is essentially a community farm, whose members, mentally disqualified for ordinary civic duties, must find on it a wholesome and congenial existence while at the same time contributing, through their efforts to its productiveness.

In spite of our isolation the employees have been contented and faithful and there has never been a time when we did not have an excess of applications.

Few institutions are located in the center of a thousand-acre tract and it has been our purpose from the outset to capitalize this good fortune for the benefit of the patients and the State.

We believe that the Alton State Hospital presents the best field for the application of the rural life idea in State hospital administration and we hope that future administrations will keep this policy in mind and offer every encouragement to those engaged in its extension.

There have been few changes in the personnel.

LINCOLN STATE SCHOOL AND COLONY.

C. B. CALDWELL, M. D., *Managing Officer.*

The annual period ending June 30, 1921, has been marked by a steady increase in the number of commitments received at the Lincoln State School and Colony. The only relief has been that afforded by the transfer of a number of male cases to the Dixon State Hospital at Dixon. There has also been a growth in the number of so-called "guests." At the present time upwards of 45 guests are enrolled and receiving care at this institution. These guests are for the most part infant children of feeble-minded mothers—the mothers being committed here through the courts and the infants coming along with them for obvious reasons. Many of these infants will eventually become committable as feeble-minded, but it is not feasible to declare them so until they are old enough to show three years' mental retardation. They have been received since 1915 as an emergency measure, but no permanent provision for their care has yet been made. As it is, they are quite expensive to care for, demanding special nursing attention, and yet the institution does not receive credit for them on the roll when the per capita basis for appropriations is calculated.

It has been noteworthy that with the overcrowding of this institution there has been a tendency throughout practically all of the 102 counties of the State to send in children of the lowest and most helpless type. This has naturally interfered with the growth of our school work and if continued will seriously hamper the school activities.

We have occupied during this period two new buildings for children. They are, (1) Hospital D—a hospital for the care of tuberculous males, and (2) the Nursery—a building for the care of delinquent women and infant children. The occupation of Hospital D allowed us to remove 23 males from Hospital C and thus allowed Hospital C to become exclusively devoted to the care of tuberculous females. The Nursery was originally built for 39 and we have crowded into this building 55 persons. This crowding was made possible by the fact that a number of these children are infants and consequently required less air space in sleeping quarters than do the adults.

The laundry situation is looking up, but as yet we have been unable to occupy the new laundry building owing to lack of equipment. Practically the whole appropriation was required to erect the building. We hope to see the new building occupied in the near future. This will then allow the present laundry building to be remodeled and used for

the store and several industrial activities, thus making more room for the work of the school, which work is now seriously hampered by lack of space.

The custom of paroling girls to general hospitals in the vicinity has been continued until now we have in the neighborhood of 30 girls doing domestic work in these hospitals. They thus have institutional care but with a chance to make a small salary weekly which is sufficient to allow them to choose and purchase their own articles of clothing. These girls appreciate the privilege and it is considered that the behavior of others with delinquent tendencies is improved by the hope of an opportunity to do some of this outside work. We also arrange for boys who show proper conduct reactions to go out from time to time and earn some spending money by doing work at so much per hour. Our children appreciate these opportunities and it is reflected in their behavior and their attitude of general hopefulness.

The cost of commodities has shown a drop pretty generally down the line and this will be of benefit in a number of ways. Deliveries of supplies are much easier to get than they were. It is noticeable that dealers are now making an effort to see that supplies are promptly delivered and otherwise to consider the business amenities that prevailed before the war.

Associated with this lowering of costs of commodities is a steady relief from the difficulty of being able to secure employees. This relief has become more and more marked toward the close of the annual period. We are now getting in a position finally where we are able to pick and choose employees and to begin to weed out those that were not satisfactory in every way while the period of war stress was on.

MEDICAL.

Contagious disease always has a front rank importance in considering the health of a children's institution. During this period we have had 3 cases of amebic dysentery, 5 cases each of chicken pox and diphtheria, 3 cases of scarlet fever, 2 cases of smallpox and 28 cases of tonsillitis. There were 2 cases of mumps. In general the epidemic diseases were prevented from spreading by the prompt establishment of isolation and quarantine measures.

Pneumonia and tuberculosis continue to be the chief diseases which cause serious alarm. Our facilities for handling diseases requiring plenty of fresh air have been much improved with the addition of the new hospital for tuberculous males.

We have continued to pay especial attention to treatment of venereal diseases. Ninety-five cases of syphilis have been receiving modern therapeutic attention. These cases were practically all infected at some earlier time in life. Strict isolation of venereal diseases is practiced in all cases where there is danger of spreading infection.

A census of the institution shows that we have 267 epileptic and 271 paralytic children.

The following surgical cases have been operated upon under the direction of the State Surgeon:

Tonsillectomy and adenoidectomy..	41	Salpingectomy	1
Appendectomy	4	Colporrhaphy	1
Circumcision	5	Hemorrhoidectomy	1
Hysterectomy	3	Fracture of the jaw.....	1
Perineorrhaphy	2	Carcinoma of the breast.....	1
Rectal prolapse	3	Intestinal obstruction	1
Fracture of arm.....	1		
Herniotomy	1		67.
Panhysterectomy	1		

During the year there were 2 births and 52 deaths. Tuberculosis of the lungs and status epilepticus were the single factors causing the largest number of deaths.

The medical department has done considerable statistical research work, compiling figures in conjunction with our psychological department and the statistical clerk of this institution.

PSYCHOLOGICAL.

Routine examinations of all new children have continued throughout the year. Re-examinations are made from time to time to ascertain whether or not improvement is being made.

A study of the admissions and children now present as compared with 10 years ago has been carried on. This shows an increase in the percentage of idiots and of delinquent morons. The present classification follows:

	Idiots.		Imbeciles.		Morons.		Other patients.	Total.
	Under 16 years.	16 years and over	Under 16.	Over 16.	Under 16.	Over 16.		
Males.....	73	100	174	400	77	200	16	1,040
Females.....	78	115	120	403	49	337	99	1,201
Total.....	151	215	294	803	126	537	115	2,241

SCHOOL.

The school has shown the beneficial effect of a steadying in the teaching force due to recovery from war conditions. A constant increase in the amount of hand work has been accomplished. The tendency in our school is to stress hand work rather than literary branches. This practice conforms with the best thought of the day along these lines. As has been mentioned the quality of the new admissions is such that they are largely not of school type.

For the work we are doing more room is needed which we hope will be provided when the shoe shop and furniture repairing activities can be moved into their new quarters in the old laundry building.

Several entertainments were given during the year—the play at Christmas time and the elaborate May-day fete held out of doors being especially successful. Music for the dances, picture shows and religious exercises has been furnished from the musical department of the school.

The rug room has furnished rag rugs over the entire institution as well as to provide for the sale of some of its products to outside persons.

This room takes care of all the surplus rags. The toy room contributed over 200 toys to the Christmas celebration. The sewing and fancy work rooms also contributed a number of articles used as gifts at Christmas time.

The school at its close in the latter part of June revived the former custom of giving an exhibit of products. In connection with this exhibit was held a program indicative of the work being done in the school. A large and appreciative audience from down town was in attendance. Special exhibits are to be sent from the school to the Pageant of Progress Exposition in Chicago as well as to the Illinois State Fair this autumn.

CLERICAL AND STORE.

There have been a number of rearrangements in the clerk's office and in the store so that the work might go on more smoothly. The clerical force is to be congratulated on the amount of county and private collections that have been turned in to the State Treasury. Something over \$100,000 was turned in during this period from these collections.

Some of the equipment in the clerical office has become much in need of replacement. New typewriters are urgently required to replace some of the old ones. Additions in the filing cases to meet the growing business of the institution are also required.

INDUSTRIES.

All of the industrial shops have cooperated in increasing their facilities for training children beyond school age. The sewing room, the brush shop, the mattress shop, the paint shop, the tin shop, the power plant and several other of the industrial departments have added a number of children to their respective services.

MECHANICAL.

The mechanical force has been occupied in making many necessary repairs. Chief of these has been the addition of five new fire escapes to the main building with a transfer of the two old spiral fire escapes to new locations on the same building. For the first time in the history of this building we now have what is considered adequate protection in the way of fire escapes.

Our mechanical department in addition to doing this special work on the fire escapes also had considerable to do with the construction up to the building line of the three new buildings—hospital D, the nursery, and the new laundry.

Walks have been laid, guttering repaired, painting and carpenter repair work has gone on throughout the institution and our steamfitting and electrical department has helped in some of the work about the new buildings thus reducing cost of construction.

We came through the winter of 1920-21 very nicely as regards coal supply.

Various recommendations have been made at other times which might here be emphasized. The power plant has a bad leak in the main steam header. By the addition of a super-heater this steam header could be repaired and we think the efficiency of the plant increased 15 per cent. Allowance has been made by special appropriation from the last General Assembly for the installation of two new boilers at the farm power plant—which replacement is sorely needed. In the main power plant the installation of ash conveyors would be the source of an increased efficiency. There was also a need felt for some way of measuring the efficiency of the power plant.

FARM, GARDEN AND DAIRY.

The farm and garden had one of the most successful years in its history during 1920. After the totals were made out in the winter it was found that over \$55,000 worth of products had been taken from the farm. This included milk from the dairy herd, meat from various animals slaughtered, farm crops, fruit and vegetables. The year 1920 was uniformly a bountiful one. An index to this is shown by the fact that one piece of 22 acres of corn averaged 95 bushels to the acre while all of the acreage in corn from the farm averaged slightly above 70 bushels to the acre. There was an immense peach crop as well as plenty of fruit of all kinds so that it could be served in the fresh state a number of times throughout the institution. In addition nearly 13,000 gallons of surplus fruits and vegetables were canned by our culinary service and 34 barrels of sauer kraut were made.

Down in Salt Creek bottom we had 40 acres that overflowed in 1920. As this acreage had been planted in corn there was nothing to do but put it in sweet corn. Seed was furnished free of charge from the local canning factory and they bought back the product at \$15 per ton. We exchanged our corn for canned corn in dozen can lots and received much more than enough to last this institution for one year.

We have been continuing to weed out tuberculosis in the dairy herd and are getting ready for a drive to absolutely clean it up. Our milk supply is and has been short considering the needs of so many children. We have been buying fresh milk daily from the leading dairyman of Lincoln and even so we still have to go further and buy condensed milk for cooking purposes.

Our herd needs to have all tuberculous animals killed out and replaced with productive animals so that if possible we may be independent of possible need to purchase milk from outside sources.

We need more land as there is a constant shortage of pasture land for the dairy animals, chickens and work stock. To offset this we have put in 33 acres of alfalfa and during the year we bought no hay at all. However this does not serve as a satisfactory substitute for pasture. It is urgently recommended that more land be purchased to properly balance the farm.

CONCLUSION.

In closing I wish to thank the members of the Department of Welfare for the many courtesies shown us and for their forbearance with our mistakes. I also take this means of publicly acknowledging the splendid cooperation given by the officers and employees of the Lincoln State School and Colony.

DIXON STATE HOSPITAL.

H. B. CARRIEL, M. D., *Managing Officer.*

The changing of the law to provide for the reception of both epileptic and feeble-minded patients has given a mixed population to the Dixon State Hospital during the year ending June 30, 1921.

At the beginning of the year there were present 95 epileptics and 160 feeble-minded patients. All excepting two of this latter number were transferred to this institution from Lincoln to relieve that institution's greatly overcrowded condition. From time to time to assist in construction work, insane patients from other State hospitals have been transferred here temporarily. Of this class there was present at the first of the year 77, making a total population of 332. Because of the limited accommodations only male patients have been received.

The accompanying table will give the number of admissions and discharges during the year. The frequent changes in the population as shown in this table are due largely to the voluntary epileptic population. These patients leave at will. During the year 46 voluntary epileptics have been admitted and the same number discharged. Some of these have been discharged and admitted two or three times during the year. The voluntary commitment law has not proved very satisfactory for the reason that many of these patients do not stay long enough to gain any benefit from treatment, while most of them want to leave the care of the institution at the very time that they need it the most.

In the change of population during the year there has been a gain of 40 patients making the total present at the close of the year, 372.

HEALTH.

The general health of both patients and employees has been exceptionally good. The institution has been entirely free from all epidemics.

Fifteen deaths have occurred during the year from the following causes: Exhaustion in the course of maniacal excitement; contributory cause, epilepsy, 1; pulmonary tuberculosis, 4; organic disease of the heart, 2; epilepsy, 3; carcinoma of the liver, 1; chronic interstitial nephritis, 1; pellagra, 1; accidental drowning, 1; general paralysis of the insane, 1.

DAIRY.

Our herd of Holsteins was considerably depleted as a result of the tubercular test last year. Twenty-one head were killed. The institution is in need of more milch cows.

FARM AND GARDEN.

Prospects for both farm and garden are exceptionally good. The early season was very dry. At the present time all crops are looking well.

BUILDINGS.

Construction work on the nine new buildings is progressing satisfactorily. Foundations are in and arrangements are being made by the contractor to put on a large force of masons and carpenters. The four buildings east of the Illinois Central track, consisting of three cottages and one dining hall, will house epileptics and will accommodate 120 patients. The five buildings located west of the tracks will be for feeble-minded patients and will accommodate, including the hospital for tubercular patients, 370 patients. Plans have been made to build additional wings to what was originally the Administration Building and to convert this building into a home for employees. When completed it will provide accommodations for 120 employees.

Appropriations have been made for eight more cottages. Besides these an assembly hall and an industrial building. These last two buildings are badly needed to provide a suitable place for amusements and different kinds of occupation.

ENTERTAINMENT.

Baseball and other outside sports have been provided during the summer months. Moving pictures and dances during the fall and winter months. Religious exercises have been held regularly except during the months of July and August.

ACKNOWLEDGEMENTS.

We are indebted to the following persons, citizens of Dixon, for their contribution of books for our library, magazines, periodicals and other reading material for the benefit of our patients:

Mr. and Mrs. W. J. McAlpine.

The G. A. R. Post.

Mrs. Belle Wiebezohn.

Rev. G. H. Putnam.

Mrs. Jacob Lievan.

Mrs. Emma Geisler.

The Elks Club.

J. B. Countryman's Estate.

Mr. Roland Greig.

We are indebted to the Dixon Ministerial Association for supplying a minister and music for our Sunday exercises which have been furnished gratis.

ILLINOIS SCHOOL FOR THE DEAF.

H. T. WHITE, *Managing Officer.*

The school work of the year closing June 30, 1921, has been very encouraging owing to the cordial cooperation between teachers and pupils. On June 7 graduating exercises were held for the class of 1921, and four young ladies received their diplomas:

Helen Irene Ballard, Roodhouse.
Emma Mercy Claus, Ottawa.

Orissa Howe Gibson, Jacksonville.
Gladys Lucy Watts, Ottawa.

These graduates have gained not only a good English education, but have been trained to be efficient managers of homes and if need be to earn a living in the field of industry. Two of them have already obtained positions as photographers.

We are glad to report a healthy interest in higher education among our pupils, several members of the advanced classes looking forward to a course at Gallaudet College, Washington, D. C., on finishing their course at this school, and teachers and officers are cooperating to keep our standards high enough to meet this demand.

It is a pleasure to commend the earnest efforts of all to go forward in oral instruction, parents giving their encouragement, teachers taking special summer courses, and pupils striving to do their part to get results. Encouraging progress has been made in improving the hearing of some of our pupils, many classes having one or two members able to profit by oral training, and one class taught almost wholly by this method. This class is conducted much like a class of hearing children. Several instruments have been tested, and though it is difficult to improve the old sheet of cardboard rolled into a tube, we find for convenience and effectiveness the audiclair, a vibratory hearing tube, gives the best service.

In marked contrast is the number, enough for a special class, of subnormal children, who are not fitted for the work of education at this school. Special provision for these children should be made, but until this is done we are doing the best we can to give them a lift along what is certain to be a difficult pathway in life.

One of the unfortunate features of our work is the number of pupils who have grown up with no education whatever. It is useless to speculate as to the blame for such a condition, but we look forward to seeing this number of unfortunates greatly reduced through the efforts of our social service worker. Wider publicity and greater efficiency in reporting cases might be secured by working through teachers of the public schools and county superintendents.

A change which we hope will mark improvement has been made in the art department. The few who show special talent for drawing are still given an opportunity to develop their talent, but where this talent is not marked pupils are not required to devote much time to an art that promises little or no benefit. However, the cultural value of drawing is fully recognized and the work is arranged to give every pupil the advantage of this training, as an aid in developing keen observation, good judgment, an awakened imagination, and as a means of mastering language.

Mention should be made of the measures taken to recognize the importance and raise the standards of our industrial department, all persons in charge of industrial training being given full rank as teachers.

ILLINOIS SCHOOL FOR THE BLIND.

R. W. WOOLSON, *Managing Officer.*

It is the purpose of the Illinois School for the Blind, located at Jacksonville, to give to all the blind children of the State, and also to those whose sight is so impaired that they cannot attend the public schools, a good, thorough, and practicable education; to make them resourceful, and so far as possible, self-supporting and independent men and women. To this end the school has been organized, and the pupils have been classified so that each one shall derive the greatest benefits during his attendance.

ENROLLMENT.

During the year ending June 30, 1921, there were 227 pupils enrolled in the school.

The institution maintains a Kindergarten School where blind children five and six years of age are received. In this department during the year 25 boys and girls were given instruction. The Montessori system is used to a great extent in the kindergarten.

The Elementary School embraces eight years' work, and each of the eight grades corresponds to that of the public schools. In the Elementary School there were 152 pupils enrolled.

The High School course contains four years' work. During the year there were 40 pupils enrolled in the High School.

The school offers a two years' post graduate course and 10 young men and women were pursuing this work.

BRAILLE SYSTEMS.

The methods by which blind children are taught in this school are the American Braille and the Revised Braille systems. The Revised Braille is the most complete method that has ever been devised for instructing the blind, and in recent years it has been adopted for universal use in the United States, France and Great Britain. It is a system of embossed dots by which it is possible to express any thought in literature, mathematics and music. Braille was the system used by Helen Keller in all her High School and University courses.

CONSERVATORY OF MUSIC.

Supplementary to the academic work is the Conservatory of Music, in which instruction is given in piano, violin, voice, pipe organ and wind

instruments. Many of our pupils become splendid musicians and make that profession their life's work.

INDUSTRIAL TRAINING.

Among the trades taught are the weaving of fine fabrics, rugs and carpets, the weaving of baskets, brush and broom making, fibre furniture, piano tuning, telephone switchboard operating, stenography and dictaphone operating. During the past year all efficient graduates have been placed in remunerative positions. We are now securing employment for those students who are completing courses this semester.

PHYSICAL INSTRUCTION.

The school maintains a large gymnasium, splendidly equipped, where all the pupils in the institution are given instruction in physical training. This course is of special benefit to young blind children who have never been taught to walk or run or play independently. Marked physical improvements are noted after short courses in this department.

All courses in the Conservatory of Music, the Industrial Department and gymnasium are supplementary to the twelve-year course in the Academic Department.

CAUSES OF BLINDNESS.

Of the 227 pupils enrolled, 25 per cent were blinded from ophthalmia neonatorum within a few days after birth. About 55 per cent were blinded from various diseases in early childhood. These children have naturally adapted themselves to delicate sense perception work, and quite readily learn to use their finger tips in reading embossed literature. About 20 per cent have lost their sight from various kinds of accidents.

STATE BRAILLE LIBRARY.

The school maintains a free circulating Braille library for the 3,700 blind people of Illinois. During the year 12,000 volumes have been mailed free of charge to blind readers of the State. A special appropriation was made by the Fifty-second General Assembly to supply books for this library.

PRINTING MUSIC AND LITERATURE.

Many of our Braille text books are printed in the school. The blind musicians throughout the United States have the privilege of buying stereotyped music from this department. One hundred and twenty-five thousand pages of embossed music were stereotyped and sold last year.

IMPROVEMENTS.

The plant consists of thirteen buildings and forty acres of ground. The buildings with their entire equipment for the education of the blind are valued at seven hundred thousand dollars.

During the year a paint and carpenter shop was built, a splendid, large porch was built on the grade boys' cottage, and an attractive drive was added to the grounds.

All the metal roofs were given two coats of paint, the interiors of eight buildings were painted and fourteen thousand feet of hardwood floor were laid. New window shades were placed at all the windows and much new equipment has been added to the class rooms and to the cottages. The improvements made have contributed greatly to the comfort of the pupils and also to the attractiveness of the institution.

ILLINOIS INDUSTRIAL HOME FOR THE BLIND.

OTTO A. ELLIOTT, *Managing Officer.*

True happiness and sweet blessing come through work. The world is so full of duties that life is too short to have time for idleness. As every person is launched into this world for the purpose of working out God's divine will, a blind person therefore should not indulge himself in idleness any more than other persons.

The sightless can do many things that have been accomplished by the seeing; however the burden of learning to do things is heavy and we should exert our greatest patience with them during their apprenticeship.

THE BROOM FACTORY.

During the year ending June 30, 1921, the broom factory at the Illinois Industrial Home for the Blind has operated quite regularly, but conditions existing in the broom trade have been such that the plant was operated at a considerable loss for the period. There are some forty blind employed in the factory, about one-third of this number being residents of the home. The capacity of the factory should be increased to a considerable extent, thereby reducing the overhead expense to the lowest figure; this in my opinion would allow us to compete more satisfactorily in the broom-making trade.

THE HOME.

Since the opening of the home years ago it has drifted far from the purpose set forth in its rule and manner of operation and only a small number of those who are in the home are now doing any work. It is my opinion that the affairs of the institution have been allowed to drift from one cause or another until it is now nearly impossible to right the injustice done the blind in the management of the home. The population is practically stationery, very few leave and many want to come in. There are a number of inmates who are getting quite old and the day is not far distant when something must be done to care for them; should they have to be cared for here it will add a heavy burden to the management and a great expense to the State. Charity and pity are not the real things needed by the blind. Encouragement and confidence are as essential to the blind as to the seeing.

IMPROVEMENTS AND REPAIRS.

During the past year the building has been rewired for electric lights throughout, the walls washed thoroughly and the interior decorated

with two coats of lead and oil paint, and all woodwork properly varnished; with all of the above work completed the home is in a first class condition.

RECOMMENDATIONS.

Eight additional power winders and one Baltimore broom sewing machine installed in the broom factory. With this installation the output of the factory could be increased to practically 100 dozen brooms daily, the output now being 60 dozen per day.

The unfinished part of the fourth floor of the home should be completed. This improvement would make room for at least forty more inmates and should be used for the blind men who wish to enter the factory and learn broom making or piano tuning, (these are the only two trades taught) and upon completion of their apprenticeship these men should give their places to others who wish to do likewise. With this system and understanding the industrial working of the home could, in a few years, be placed on a substantial footing. If something of this kind is not done, then in a short time this home, instead of being the Industrial Home for the Blind, will be a Home for the Aged Blind.

ILLINOIS SOLDIERS' AND SAILORS' HOME.

COLONEL JOHN W. REIG, *Managing Officer.*

My appointment as managing officer was made on September 1, 1920, and this report for the fiscal year ending June 30, 1921, therefore, includes the last two months of the administration of my predecessor, Captain John E. Andrew.

Upon assuming the responsibilities of the office, I found that I had inherited many problems growing, to a large extent, out of the retrenchments, lack of laborers and other conditions incident to the World War, from which we had recently emerged. The high cost of operation, which could not have been foreseen on account of fluctuating values, resulted in a deficiency in appropriations and many needed repairs could not be undertaken. The physical condition of the entire institution had suffered to a great extent. Repairs to power plant and buildings were needed on every hand. Buildings, almost without exception, were in need of paint, and other improvements.

By judicious use of available funds and the generous allowances of the last legislature for present and future needs, rapid progress is being made in the improvement of the physical condition of the home. The power plant has been completely overhauled, new stokers installed and boilers retubed. All of the main buildings have been repainted. Outside painting has been completed on cottages 20 and 22, Library Building, Headquarters Building, Lippincott Hall and Main Hospital. Interiors of six buildings have been finished.

Our estimates for improvements and repairs made to the legislature were confined to actual necessities and were allowed almost without exception.

The main items for which appropriations were allowed include increased coal storage facilities, coal unloading equipment, ash conveyor, refrigerator enlargement, extension of water mains for adequate fire protection, fire escapes, toilet facilities for second floors of cottages, septic tank, camp telephone system, kitchen elevators and the remodeling of cottage 21 for the proper care and isolation of our demented, cancer, and contagious disease cases.

This last item is most important of all, as the home has been criticised for many years for the condition of the place known as ward E or the "Bull Pen," as it is familiarly known by our older members. When these alterations are completed and these unfortunates placed in their new home, I will personally feel gratified that a just cause for

criticism has been removed and that something has been accomplished that is "really worth while."

In looking over past reports of years gone by, I find many conjectures of what might become of the home in a few years' time. The time limit set for its use for care of Civil War veterans by some writers has long since passed. The last few years have shown little change in the population of the home.

First admissions for the fiscal year total 252; readmissions 255. The number of first admissions is surprisingly large as viewed by the casual observer, yet it is easily accounted for. Present economic conditions and the advanced age of members and resulting infirmities are bringing them in for the first time.

Fully 60 per cent of admittances are hospital cases upon arrival. We are rapidly becoming a great hospital and this is our coming problem.

Sufficient quarters are available for veterans, but our present accommodations for husbands and wives and widows are taxed to the utmost during the winter season. Waiting lists have had to be established for married couples and widows. The question of more facilities for the care of needy widows is one of our problems to be met.

The following statistics of our present and enrolled strength for past three years shows little change in membership:

	Men.	Women.	Total.
Present—			
June 30, 1919.....	941	284	1,225
June 30, 1920.....	787	258	1,045
June 30, 1921.....	786	283	1,069
Present and absent—			
June 30, 1919.....	1,261	455	1,716
June 30, 1920.....	1,131	472	1,603
June 30, 1921.....	1,097	479	1,576

ATTENDANCE AND ENROLLED STRENGTH ON THE LAST DAY EACH YEAR.

	Present.		Enrolled.		Total.
	Men.	Women.	Men.	Women.	
December 31, 1918.....	1,078	324	1,273	444	1,717
December 31, 1919.....	1,042	365	1,263	504	1,767
December 31, 1920.....	934	348	1,147	493	1,640

DEPOSITS OF MEMBERS IN HOME BANK SHOW THE FOLLOWING:

June 30, 1919.....	\$56,683 47
June 30, 1920.....	66,301 77
June 30, 1921.....	73,038 62

Total number admitted to home to June 30, 1921, 11,924 men, 1,328 women.
Total number buried in home cemetery to date, October 26, 1921, 2,956.

. Our members are contented and upon every side can be heard the expression that "we have the best home in the United States and have more privileges and are better cared for than in any other home." That this is appreciated by the veterans and that they are thankful to the great State they served so well is self evident to everyone who may question these patriotic comrades.

They are banded together as a family and, realizing that its happiness rests upon the individual acts of each member, the spirit of brotherly love is evident on every hand and contentment reigns—a happy home and a haven of rest in their declining years.

As the managing officer, I am indebted to all officials, sergeants of cottages and heads of departments for their splendid cooperation without which no success can be assured.

SOLDIERS' WIDOWS' HOME OF ILLINOIS.

NETTIE M. MCGOWAN, *Managing Officer.*

I have the honor to submit the following report of the Soldiers' Widows' Home for the year ending June 30, 1921.

On July 1, 1920, there were 102 members in the home family. During the twelve months covered by this report there were 43 admissions and 18 deaths. In addition to this loss by death, 20 women requested and received discharges. Of the latter number several have taken the little hoard of money that had been accumulated for them in the trust fund of the institution and are attempting to live on this and their pensions until such time as sickness shall overtake them when they plan to return to the home. Others, with the last remnant of their strength, have sought the old, familiar surroundings of their youth or middle-age, and there, in the midst of their old neighbors and friends, are waiting—waiting for the final summons when they may close their eyes in sleep, the “sleep that knows no waking joys.”

Considering the advanced age of the women in the home, 75.4 years, their health during the past year has been good. Time seems to stand still for most of them. One notes that their steps are more faltering, their shoulders more bent; that eyes have grown dimmer and that numbing fingers refuse to hold the knitting needles and quilt blocks that in former days have helped them pass many dull and monotonous hours. The deaths recorded during the year have, without exception, been due to old age and its incident infirmities.

The feature of this institution which especially appeals to an applicant for admission is the fact that each woman has a room to herself. Recognizing that these women have all been housekeepers and homemakers in earlier life, and that like all elderly persons they have many possessions that are treasures to them, whatever they may seem to others, a wide license has been given them in fitting up their rooms. Some have been wholly satisfied with the furnishings supplied by the State. Others have made their rooms gay with old-fashioned rag-rugs, bright “log-cabin quilts,” crocheted tidies, silk “throws” and plants in the windows. Some rooms are the despair of the cleaners, but they mean much to the old ladies—they mean “home.”

With each passing year a change is noticeable. Struggle as the women may, and do, the home is gradually growing into a hospital. As a woman becomes feeble and nearly helpless, she is brought from her room to one near the elevator. Soon she is moved down to the lower

floor which is reserved for crippled and helpless members, and one more wheel-chair is brought into the dining-room. Then, quietly, some day her place at the table is given to another and as the change is noted, a silence falls, for each woman knows that one more bed has been filled in the infirmary, one more woman is simply "marking time" until taps shall sound.

There has been one death among the employees of the home during the past year. Margaret Johnson, certified to this institution as Supervising Nurse, December 1, 1920, died December 14, 1920, of pneumonia. In the few days that Miss Johnson was on duty she showed a sympathetic attention to the wants and wishes of the patients that appealed to members and employees alike and she was sincerely mourned by all.

The physical plant of the home has been greatly improved during the year. Many of the repairs and improvements projected during the previous twelve months have been completed and there is a consequent gain in comfort as well as in appearance. The enlarged kitchen and brick chimney—the latter replacing an unstable iron smoke stack—is a comfort indeed as the frequent alarms of the old ladies that "there must be a fire somewhere in the building as the house is filled with smoke," are finally quelled. The range used in the kitchen has been repaired times without number and is practically beyond remedy. It should be replaced at an early date.

The porch surrounding three sides of the main building was pronounced unsafe some time ago and the members were deprived of its use for several months. The completion of the repairs of the supports, floor and railings of the porch has been especially appreciated, as most of the older women in the house limited their outings to daily walks along its length.

There is a great and growing need for a sun-parlor or solarium for the patients in the infirmary as well as the feeble and wheel-chair patients in the main building. I would respectfully recommend that this improvement be brought to the attention of the next General Assembly so that a special appropriation may be made to cover the cost of such an addition to the home.

New boilers and a new and enlarged power house that will also accommodate a two and one-half ton ice plant are necessities that have already been favorably acted upon by your honorable body. Additional fire escapes and some much needed interior decorating were also included in the budget submitted to the last General Assembly.

The destructive winds of the last few years have worked havoc in the orchard and but few trees are left to tell the tale. It would be economy to replace these trees as soon as possible. Several of the splendid old oak trees that are the pride and beauty of the institution are in need of expert care and the hedge and driveway need attention. The fencing between the home grounds and the neighbors on either side

is in bad condition and should be replaced with new posts and wire.

There have been but few changes among the employees in the last twelve months. The serious illness of two and the marriage of four others cover 50 per cent of the resignations from the State service, while more than one-third of the employees now on the payroll are receiving the maximum salary in their classification.

There has been an earnest desire to live within the appropriation allotted this institution. Every item that was not deemed absolutely necessary for the care of the patient or the upkeep of the home was eliminated in the hope that the cost of material and labor would, ere another twelve months had elapsed, swing back to normal. This policy has meant that there is but little reserve stock in the store-rooms and that much must now be done to bring this institution back to the standard that it had attained prior to the outbreak of the World War.

THE ILLINOIS SOLDIERS' ORPHANS' HOME.

RALPH SPAFFORD, *Managing Officer.*

This brief summary of the activities of the Illinois Soldiers' Orphans' Home for the fiscal year ending June 30, 1921, covers a period during which John W. Rodgers was managing officer the greater part of the time, his resignation becoming effective June 6, 1921.

With an average population of 351 children and only one death during the year, the physical condition and general health of the children shows improvement over the preceding year. We have had an epidemic of chickenpox totaling 27 cases, a few cases of whooping cough and measles. Diphtheria invaded the ranks of our employees but the children were more fortunate and escaped. This, we believe was due to the fact that all children had been given the Schick test and all susceptibles immunized by toxin-antitoxin treatment. Credit is due our physician and surgeon, Dr. Ralph P. Peairs, for his untiring and careful supervision of the health of the children.

Dr. J. Whitefield Smith devotes all of the time necessary to the proper care and treatment of diseases of the eye and ear. Many cases of defective vision have been corrected by proper fitting of glasses, resulting in more rapid advancement and better averages in the children's school work.

In caring for the children's teeth the report of our dentist, Dr. Henry G. McCormick, shows 2,529 examinations, 275 extractions, 1,185 cleanings, 152 treatments, 23 root fillings, 29 amalgam fillings, 168 cement fillings, 601 treatments for diseased gums, 8 regulating cases. An estimated total of \$3,303 free service was rendered in this department.

Early in the year 1921, contractors started the work of erecting a new ten room school building. This building when completed, will accommodate about 450 students. Many modern ideas are incorporated which will contribute to the comfort and convenience of the children and teachers.

During the year past our school was in session thirty-six weeks. The Art and Design Department received an additional four weeks' instruction and the manual training work was carried through eleven full months of the year.

Our school system is under the supervision of David Felmley, president of the State Normal University. E. A. Turner, director of the University Training School, makes personal visits to the school to

observe the work of the teachers. The eleven teachers are all graduates of the State Normal University. Miss Mae Goodwin is principal and critic teacher. A feature of the school is the opportunity or ungraded room in charge of Miss Mabel Pumphrey. Here the children learn to read, write and cipher. Because of slow progress made by some of the children the work is varied and games which call for action are played. Sewing for the girls and manual training for the boys are used to help develop the child's mind and ability profitably to use his hands.

At the close of the school year 1920-21, a physical demonstration was given on the campus. On the same day there was a school exhibit which included the school work in art and design and manual training. The graduates of our school are admitted to the University High School without examination. Seven were graduated in June, 1921. The average attendance for the school year was approximately 350.

H. O. Merry is in charge of the musical instruction in the institution, teaching piano, violin, and band instruments. As a result of his efforts, we have a boys' and girls' orchestra which is now taking an active part in school and chapel programs. Our boys' band numbers about eighteen pieces and is a creditable organization, the music being greatly enjoyed by all the children.

Since January, 1921, the work of placing dependent children in family homes has been done under the supervision of R. W. Blackwelder. During the year just closed, he placed 81 girls and 61 boys, replaced 8 boys and 20 girls; 13 boys and 16 girls were returned and not placed. During the same period he placed 5 boys and 5 girls for other institutions; 5 girls and 2 boys were legally adopted. One infant boy died. Five boys and 6 girls were returned to parents or responsible relatives. Two girls and 1 boy were discharged; 4 boys and 2 girls were transferred to other institutions. Sixty-three counties have children from the Soldiers' Orphans' Home.

Mr. Blackwelder supervises the wages and expenditures of all placed on a wage or partial wage basis. The gross earnings for the first eighteen months that he had charge were \$4,098.81, out of which \$1,054.31 was saved. These savings are deposited in the savings department of the First National Bank of Normal. When the ward is discharged at the age of eighteen the balance of his savings plus the interest the bank pays is paid over to him. Seven children placed in family homes are attending high school in six different cities of the State.

Our garden has furnished large quantities of fresh fruit and vegetables for daily consumption besides a considerable quantity which has been canned for future use. Our farming operations have not resulted in much benefit to the institution except to raise feed for our hogs and horses. We believe that with the addition of from fifty to eighty acres more land and a herd of dairy cows a much better showing could be made with the land, which is not now profitably farmed.

A new cottage with accommodations for about forty girls is now in course of construction. We are glad to note that plans are under way to provide a new power plant for the institution. This improvement together with a few cottages to house our boys and the remodeling of our present hospital building seem to be the pressing needs of the institution at this time.

THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.

LEO STEINER, M. D., *Managing Officer.*

On February 11, 1921, Judge C. H. Jenkins, Director of Public Welfare, assumed the duties of acting managing officer of this institution, and immediately instituted an intensive renovation of the interior of the building.

All the walls and ceilings have been thoroughly washed and painted. This includes the wards, the operating rooms, the clinical department, the kitchen, the bakery, and the laundry departments. The plumbing has been repaired wherever necessary, and the heating system has also undergone repairs.

Plans are now under way for the painting of the exterior of the building, and also for a new floor in the receiving room.

THE MEDICAL STAFF.

The medical staff has been reorganized, and Dr. William L. Noble of Chicago has been appointed chief of the staff. He has in turn appointed an executive staff, who give up much of their time and energy for the success of this institution. The medical staff of the Illinois Charitable Eye and Ear Infirmary is composed of the following physicians:

WILLIAM L. NOBLE, *Chief of Staff.*

(Heads of Services).

E. K. Findlay.
Norval H. Pierce.
Henry Boettcher.
Harry H. Woodruff.
Dwight C. Orcutt.
Robert Von der Heydt.

Michael Goldenburg.
Ulysses J. Grim.
S. M. Hager.
M. H. Lebensohn.
Alfred Lewy.
W. K. Spiece.

MEMBERS OF STAFF.

Clifford Bullen.
H. C. Ballenger.
Eugene Birmingham.
Hallard Beard.
Robert H. Buck.
Paul Caspers.
Oscar Cleff.
E. R. Crossley.
Dosu Doseff.
James Groves.
Wm. A. Gross.
C. F. Tuomy.
E. F. Garraghan.

Chas. Lockwood.
Chas. Long.
Jacob J. Mendlesohn.
Shirly Munns.
D. J. O'Laughlin.
James L. O'Connor.
Noah Schoolman.
Emily H. Selby.
Carl O. Schneider.
Adelaide Tyrrell.
G. D. Theobald.
Oliver J. Watry.
Chas. Yerger.

Raymond Harrington.
 Arthur P. Hunneman.
 Louis J. Hoffman.
 B. T. Hoffman.
 Edward Howland.
 Francis Lane.
 Jacob Lifschutz.

Herbert Walker.
 Morris A. Glatt.
 Elbert Clard (Dermatologist.)
 Wm. L. Douglas (Dentist.)
 Maurice L. Blatt (Pediatrician.)
 Benj. Goldberg (Internist.)
 Clarence A. Neyman (Neurologist.)

Among these are some of the eminent ophthalmologists and otologists in the West.

With the cooperation of Dr. W. L. Noble and the medical staff, the following system has been inaugurated:

First—An internist, Dr. Benjamin Goldberg, has been appointed, who examines all the house patients thoroughly so that better medical work can be done, not only for the eye, ear, nose and throat, but other general conditions.

Second—Urinalysis and blood tests are made of each house patient before entering the infirmary.

Third—The pediatrician, Dr. M. L. Blatt, a member of the Cook County Hospital staff, makes a visit every day to the institution and looks after the welfare and the health of the children.

Fourth—The dentist, Dr. W. L. Douglas, visits the hospital twice a week and looks after the dental work of the patients.

Fifth—A neurologist, Dr. Clarence A. Neyman, has also been appointed, and looks after those conditions.

Under these favorable conditions, we not only look after the eye, ear, nose and throat, but also the general health of the patients.

The deans of all medical colleges of the State of Illinois were invited to make some arrangements whereby the students of their institutions can avail themselves of the splendid opportunities of the immense clinic that this institution has.

We are at all times pleased to welcome post graduates, who desire to attend our clinic.

NURSING SERVICE.

While the nursing situation has been a difficult problem in the past, this institution at present has an adequate number of nurses who are graduates of standard training schools. The efficiency of the nursing corps has been brought up to a higher standard and remains so. During our recent home-coming clinic, four operating rooms were in use all day for two consecutive days. Forty-five operations in all were done and the nursing forces handled the situation with credit.

DOMESTIC SERVICE.

The domestic situation in the hospital has improved very much recently. Since help is easier obtained, those who did not qualify in efficiency have been replaced by others who are willing to discharge their duties properly.

OPTICAL DEPARTMENT.

During the year ending June 30, 1921, this institution has dispensed approximately six thousand pairs of glasses. Close to six hundred of these have been given free, upon the recommendation of such institutions as the United Charities of Chicago, Visiting Nurse Association, Juvenile Court of Cook County, Park Ridge School for Girls, Chicago Health Department, Illinois Society for Prevention of Blindness, Cook County Agent, Jewish Home Finding Society, Municipal Tuberculosis Sanitarium, Board of Education, Glenwood Manual Training School, and other responsible charitable organizations.

We have also taken care of patients who had to have X-ray work done, and have given free X-ray pictures to the needy poor.

With the reorganization of the attending staff and the unanimous cooperation of all concerned, we believe even better results may be obtained during the next fiscal year.

MOVEMENT OF POPULATION, YEAR ENDING JUNE 30, 1921.

	Male.	Female.	Total.
Present at beginning of period.....	75	38	111
Admitted during period (new).....	1,599	1,375	2,972
Readmitted during period (former inmates).....	208	115	323
Total.....	1,882	1,524	3,406
Discharged from institution during period.....	1,796	1,484	3,280
Died during period.....	4	1	5
Present at end of period.....	82	39	121
	1,882	1,524	3,406
Number of dispensary cases treated through year ending June 30, 1921.....	25,074	24,138	50,212

THE ST. CHARLES SCHOOL FOR BOYS.

C. B. ADAMS, *Managing Officer.*

I have the honor to submit the following report as Managing Officer of the St. Charles School for Boys, covering the period from July 1, 1920, to June 30, 1921.

There were present in the institution on July 1, 1920, 843. One thousand fifty-five boys were on parole, and fifteen absent without leave. Four hundred forty-seven boys were admitted during the year, and 15 re-admitted. Thirty-five were discharged from the institution, and 358 discharged from parole. Eight hundred eleven boys were present in the institution on June 30, 1921, a decrease of 32 during the year, but regardless of this decrease in population, we are still very much overcrowded. An appropriation was made by the last legislature for several new cottages, but owing to the high cost of material and labor it was found impossible to build the cottages with the amount of money appropriated, so this appropriation will go over to another year and an additional or new appropriation will be asked for to build the additional cottages which are very much needed.

As stated above, we have 1,055 boys on parole, and only three field officers to look after these lads during the period when they need close supervision. We should have at least two more parole officers in order to supervise properly these lads. Lack of supervision means return to the institution. This is an expense to the State and it would certainly be more economical to pay the salaries and expenses of additional parole officers and thereby save the return of so many boys to the institution.

The health of boys in the institution, considering the overcrowded conditions, has been very good. Four boys have died during this period. During the year we have had several cases of pneumonia, 5 cases of scarlet fever, and 7 cases of diphtheria, but by careful isolation, the spreading of these diseases was controlled, with the result that we had a limited number of cases.

We have a well equipped dental department and should have a dentist to devote his entire time to looking after the dental work. This, I understand, is planned, but it has been impossible, it seems, to secure a dentist at the salary paid, so we have had to depend on a dentist coming out from St. Charles and giving us three half days each week, which is not a sufficient amount of time to look after the teeth of our population.

I want again to recommend that the institution should have a trained psychologist. Psychological tests could then be applied to all lads when they enter the school, and this should be followed by pedagogical and industrial tests, and the boys then placed in school and

industrial department according to the examination thus made. A survey has been made by a psychologist and his report shows a large number of subnormal boys in the institution. A large percentage of these lads do not belong here and should be transferred to an institution for the feeble-minded.

In the Academic Department considerable progress has been made. The lads admitted to the school are sent first to an ungraded class, which is in charge of a very capable teacher. They are held in this class generally for several weeks and a study is made of their mental condition, and assignment to a grade is made on the recommendation of the teacher in charge, approved by the principal. This plan has worked out very satisfactorily. In proportion to the population, a larger number of upper grade pupils were received than in the previous year. For this reason our upper grade classes have been large and we were able to graduate a class of 55 boys from the eighth grade in June, 1921. Such of these boys as were entitled to parole, went out of the institution after graduation, and the remainder were entered in the commercial department. Various programs were given throughout the year in observance of special days. The first large program was an appropriate observance of the three hundredth anniversary of the landing of the Pilgrims. It was participated in by 150 costumed pupils and depicted the story of the landing of the Pilgrims. Attention was given throughout the year to the various campaigns, such as "Good English Week," "Health Week," "Clean Up Week," etc. Appropriate lessons were given in connection with these subjects, posters developed, and follow-up work carried on. Our teaching staff consists of fourteen grade teachers, one teacher of commercial subjects, and one music supervisor.

The Military Department is in excellent condition and is doing splendid work. Athletic activities, sports, and playground activities have all been pursued for the definite purpose of improving the physical condition of the boys. Labor Day last year and the first Monday in May were devoted to track events, many of our boys competing with representatives from the various high schools in the Fox River Valley. On October 18, 1920, we held our annual military field day, and in June of this year, the semi-annual military field day. The boys take a great deal of interest in the competitive drills. The judges of these drills are officers from the regular army, many of whom have seen service overseas, and having these officers present on such occasions is inspiring to the boys. Dress parade is held each Sunday afternoon during the summer season, and a large number of persons from the nearby towns and cities are present to witness the parade. Many of the boys going out from the institution, enlist in the army or navy. By reason of the military training acquired here, many of them have been appointed non-commissioned officers, and some few during the late World War became commissioned officers.

Our band has played a number of concerts away from the institution and on several occasions the cadet regiment with the band have paraded in St. Charles, Geneva and Aurora.

Much has been done in the way of repairs to various buildings, cottages, and interiors and exteriors painted. In March, 1920, Farm Cottage F and barn were destroyed by cyclone. The cottage and barn have been rebuilt and repairs made to other buildings damaged.

The power house, by reason of obsolete machinery, has been the cause of considerable expense in the way of repairs. Two iron stacks which had been in place for some years became rusted and had to be taken down and replaced by a new brick stack. Besides taking care of general repairs to electrical, plumbing and heating, in the various cottages, the power house department has installed plumbing and heating equipment in the addition to the Employees' Building, and Farm Cottage F, repiped deep wells and installed Wasson air lifts. Farm Cottage F and addition to the Employee's Building were also wired for electricity, and the engine and boiler rooms rewired. A stoker was installed under one boiler, and chain skids installed and stoker completely rebuilt under another boiler.

The athletic field and campus have been graded and sodded. Farm roads have been built, and the public highway passing the institution kept in good repair. The Lincoln Highway, which crosses the institution on the south side, will soon be paved. This gives us a concrete road into the towns of St. Charles and Geneva.

The Sinton farm, which adjoins the institution, has been leased and a recommendation was made to the legislature through the Department of Public Welfare for an appropriation to purchase this land. An appropriation of \$45,000 for its purchase has just been made.

The farm has been very productive during this last year. Following is a list of the farm and garden produce:

Corn	4,000 bushels	Milk	69,587 gallons
Wheat	1,223 bushels	Butter	6,116 pounds
Barley	1,559 bushels	Canned tomatoes	7,000 gallons
Oats	12,646 bushels	Canned beans	175 gallons
Rye	80 bushels	Pumpkin butter	1,100 pounds
Hay	110 tons	Cherries	275 bushels
Clover	40 tons	Strawberries	8,540 quarts
Ensilage	585 tons	Blackberries	2,035 quarts
Sugar beets	70 tons	General garden truck	1,874,490 pounds
Straw	100 tons	Rhubarb	6,740 pounds
Cow beets	20 tons	Veal	1,543 pounds
Soup beans	100 bushels	Mutton	1,267 pounds
Potatoes	2,954 bushels	Poultry	5,360 pounds
Asparagus	1,812 quarts	Eggs	2,256 dozen
Grapes	120 bushels	Pork	6,151 pounds

All trees in the orchard were sprayed four times, the soil was thoroughly dug up and all trees were closely pruned. One hundred new trees were set out and are doing well. Following is a list of produce from the orchard:

Apples	2,264 bushels
Pears	488 bushels
Plums	320 gallons

THE STATE TRAINING SCHOOL FOR GIRLS.

LUCY D. BALL, *Managing Officer.*

The annual report for the period ending June 30, 1921, is hereby respectfully submitted:

At the close of the last fiscal year, June 30, 1920, the population of the school was 421. On the same date, 1921, the records show that there were 413 girls enrolled.

The total number of admissions during the year was 219, of which 177 were white and 41 colored.

There were no deaths during the past year.

Two girls were committed to the Elgin State Hospital, one to the Kankakee State Hospital and six dropped from the roll following their commitment to the Lincoln State School and Colony.

There have been discharged 207 girls, 50 by court and 157 by age. The latter number includes those discharged from parole as well as from the school.

Twenty-four girls who escaped have not yet been located.

PAROLE DEPARTMENT.

Two hundred thirty-six girls have been paroled from the school in the past year; 103 of this number were returned to their homes. There are at present (June 30, 1921), 679 girls on parole from the institution, 235 of whom are working as domestics, 44 in factories, 51 doing clerical work, 8 are telephone operators, 18 girls are attending school.

SCHOOL DEPARTMENT.

There has been a full corps of teachers practically all of the time. During the absence of the director of music for several weeks, the chorus work was continued by one of the girls of the school who also had charge of the music at all religious services. Her work was most creditable.

The last legislature granted an appropriation of \$37,500 for building an addition to the school building. The plans have been drawn to include in this addition a large industrial room, sewing class room and domestic science laboratory, all of which have been much needed for several years. Work will be started on the new building at an early date.

A set of Globe-Wernicke filing cases has been procured for use of the commercial class in their filing and indexing course.

There were 49 girls in the graduating class this year, 18 of whom completed the eighth grade, 5 the first year high school and 26 the commercial course.

Eighty-five volumes were added to the school library during the year.

FARM AND GARDEN.

The farm and gardens of the school have never produced better. In March an appointment was made to fill the vacancy of head farmer. Since that time the improvement in the dairy herd and the condition of the farm generally has been marked.

Harvey Cottage, which had long been unoccupied because of the need of extensive repairs, was repaired and remodeled by our own mechanics and has been occupied since Thanksgiving by the teachers, parole officers and clerical staff, who had formerly been living in the cottages occupied by girls.

Contracts have been let for the erection of fire escapes on cottages which have no such provision at present.

We were keenly disappointed to learn that the appropriation which had been requested for the building of a laundry, canning plant and bakery was not granted. These buildings are greatly needed and we trust will be provided for by the next legislature.

ILLINOIS STATE PENITENTIARY.

E. J. MURPHY, *Warden.*

Pursuant to the requirements of the administrative code calling for a report from the different departments and divisions for the fiscal term ending June 30, 1921, I am herewith submitting data covering the more important operations and conditions at the Illinois State Penitentiary for the period stated.

The character of the prison population has been greatly changed during the past two years through the operation of the Sadler law and other new penal legislation. This is particularly true in the fiscal year ending June 30, last.

Coming into effect on the wave of crime which manifested itself following the war, coupled with a concerted drive by all the Chicago courts last winter and spring, the enforcement of these new laws has resulted in sending to the Illinois State Penitentiary an unusually large number of the most desperate criminals ever confined at one time in this institution, all of whom, under extended sentences, are destined to remain here for several years. This type of criminals has added not only to the cost of maintenance, but to the task of keeping the prison population within proper bounds of discipline and security.

Under the Sadler law, effective July 1, 1919, robbery with a gun—one of the most numerous and dangerous crimes peculiar to Chicago—is made punishable by a sentence from ten years to life. Formerly it was one year to life. The minimum under the new sentence, allowing for the statutory good time, is six years and three months.

In the first year, ending June 30, 1920, there were received 43 prisoners under the Sadler law. In the fiscal year covered by this report, there were received 75 prisoners under the Sadler law. This makes a total of 118 ten-to-life prisoners received in two years, and that total is being augmented every month.

Other new legislation increasing the length of sentences is noted for the following crimes:

Plain robbery, formerly 1 to 14 years, now 3 to 20 years; and theft of automobile, formerly 1 to 10 years, now 2 to 15 years.

Under each of these new laws, a number of prisoners were received during the last fiscal year. In addition, there has been a notable increase in the number of long-term definite-sentence prisoners admitted. During the year ending June 30, 1921, there were received 34 "life termers," two prisoners for 35 years each, 15 for 25 years, 6 for 20 years, 3 for 18

ILLINOIS WOMAN'S PRISON.

GRACE FULLER, *Superintendent.*

Having been asked many times the function of the Woman's Prison in the State department, it may not be amiss to say that this institution cares for all women over eighteen years of age convicted of felonies in the State of Illinois.

The building, stately and imposing, well-lighted and ventilated, is built to care for one hundred inmates, and for our small family is inconvenient, expensive, and not only difficult, but impossible to keep clean: out of date as to plumbing and heating, an unwieldy unit.

POPULATION.

There are at present 40 inmates, the average chronological age of whom is 33.1 years. The oldest woman is seventy-six years and the youngest just past eighteen. The average mental age is about twelve years. Twenty-four are white, sixteen colored and three foreign born.

The crimes for which these women have been convicted are: Murder, 9; manslaughter, 5; sex crimes, 5; larceny, 8; robbery, 4; bigamy, 3; forgery, 2; burglary, 1; perjury, 1; receiving stolen property, 1; and confidence game, 1.

This record rather shatters the popular newspaper reports that no women are convicted of murder in Illinois. Four of the murder cases are from Chicago.

The average age of admission is 28 years, average time served, two years. From statistics obtained in the survey by the psychological department of the Division of Criminology it was found that as compared with the data obtained in the survey of the Illinois State Penitentiary, the inmates of the Woman's Prison rate slightly lower in intelligence, have a lower age of admission, remain a shorter time, have a higher percentage of cases of mental disease and mental deficiency, fewer cases of previous record, and a greater percentage of cases who successfully complete their parole.

HEALTH.

The suggestions made by Miss Theresa C'low, State Dietitian, last year are followed in our menus, and the careful dietary with the regularity of the life, make for a good health record. We have a good doctor on call, Dr. Fletcher of the Illinois State Penitentiary. We have had no serious illness, a very happy improvement over last year's report.

About a year ago we put our hospital in order. It is a fine, large,

light room at the top of the house, and the State Surgeon, Dr. S. W. McKelvey, assisted by Dr. Fletcher and Dr. Phillips, performed six operations for our women, three abdominal and three throat cases. All made excellent recoveries, and are in much better condition to maintain themselves in the world than when they came to us. Dr. McKelvey will take care of other surgical cases as they become necessary.

We have had the cooperation of the Charitable Eye and Ear Infirmary and eleven women have been fitted to glasses. About one-half the population have had dental work done, extractions and simple fillings having been made by the State dentist, and more complicated cases, for which we had neither the materials nor the equipment, have had very careful attention by Dr. W. C. Clyne of Joliet. Since the teeth have been discovered to be an index of the general physical condition it is of great importance to have frequent examinations and necessary work done for these unfortunate charges.

EDUCATION.

The average grade reached by the inmates is the sixth. Instruction is provided for the illiterates by a parish worker and assistant from Christ Episcopal Church. Classes are held two evenings a week. The progress of these women is remarkable and those of the inmates who have had more school training are always glad to help with the school work.

A library of 450 books has been given us at the request of the parish worker, containing such works as the Waverley novels, Dickens' complete works, and many single volumes by good authors. These are being classified and cataloged by one of the inmates. We have also the privilege of books from, and under the regulations of, the Illinois State Penitentiary Library.

DISCIPLINE.

The matrons and other workers are remarkable in their social effectiveness and fidelity to duty as they see it. Our aim is to maintain an atmosphere which is intimate and friendly, rather than formal and institutional.

The women are cheerful and while not one is contented, as a group, they show great interest in their work and recreation, and in plans for making good after their release.

Punishment is in conformity with the progressive merit system, demotion in grade or loss of good time. This system has proved valuable in the Woman's Prison. An instance of its effectiveness was the postponement, for bad conduct, of one woman's hearing before the Division of Pardons and Paroles, from the customary eleven months to eighteen months, which proved an example to herself and the others of the futility of failing to cooperate with the management.

WORK.

United States flags have been made for the other State institutions, the last two, 20 by 30 feet, for the St. Charles School for Boys. To visualize these flags one has to remember that the average room is 15 by 16 feet.

Owing to the drought, last year's canning record has not been reached. The total amount canned this year is 1,575 quarts. The garden is having excellent care by one of our matrons who qualified as gardener and carried on the work in addition to her house duties.

IMPROVEMENTS.

We have put in new tubs and shower baths on the second floor, inmates' quarters, discarding the out of date bathroom on the first floor. We were able to make this much needed improvement at comparatively small expense, using our own-employees for the labor.

The fan for forcing hot air into the inmates' quarters has been put into good working order which will make a tolerable temperature possible there, even in extreme weather. The soilpipes under the entire building have received long-needed attention and are no longer a menace to health.

The toilets are out of date and unsanitary, and would be dangerous except for the very high ceiling and free ventilation in the quarters at all times.

The labor for these improvements has been furnished by the Illinois State Penitentiary under the able direction of J. W. Miller, chief engineer, whose constant fidelity to high sense of duty under trying conditions I wish here to acknowledge.

Our recreation yard and garden have been improved by the addition of shade trees, fruit trees, shrubs, berry bushes and vines, and a grape arbor is being constructed.

We have been fortunate in having the services of Dr. David P. Phillips, Jr., mental health officer of the Division of Criminology, who, with his assistant, has examined and classified all our women. Dr. Phillips' unfailing tact and good judgment have added noticeably to the harmony of the entire household.

RECOMMENDATIONS.

I must repeat the recommendation made last year in regard to the water supply. We should have a well on our own premises to furnish suitable water for drinking, cooking, laundry and bathing purposes, equipped with electric power for distribution; and a mechanical or chemical softener. Our present daily supply for drinking and cooking is furnished by the Illinois State Penitentiary, and brought to us by hand by one of their inmates. The water is excellent and its delivery a gracious and appreciated courtesy of Warden Murphy, but as household efficiency, the systems classifies in the Stone Age rather than the Twentieth Century.

SOUTHERN ILLINOIS PENITENTIARY.

E. P. PETRI, *Warden.*

In submitting this report of the Southern Illinois Penitentiary for the period from July 1, 1920, to June 30, 1921, I wish again to call your attention to the general good discipline that is being maintained, and the attitude and good behavior of the prisoners toward the authorities, which has been brought about by the hearty cooperation of the officers, and is not the result of forced submission.

PROGRESSIVE MERIT SYSTEM.

The progressive merit system was made effective here March 1, 1921. In order that the system may function to the best advantage, a prison staff composed of the Warden, Assistant Warden, Physician, Psychiatrist and one or more junior officials, who come in daily contact with the prisoners has been organized. The staff meets two or three times each week, and all misdemeanors, punishments, promotions and demotions are considered at these meetings.

Working in harmony with the prison staff, is the Warden's junior court, conducted by the Second Assistant Warden. These investigations are held at the close of work each day, and prisoners that have been reported for offenses, committed during the preceding twenty-four hours, as well as the officer making the report, are called in and it is then determined if punishment shall be done in solitary confinement or referred to the staff.

While the progressive merit system has been in effect but a short time, we notice a decided change for the better in the work and conduct of the inmates, and believe as time goes on the system through its proper application will be instrumental in returning many men to society anxious and willing to become good citizens.

WATER SUPPLY.

The water situation here for a number of years has been a grave question owing to the river conditions at point of intake of our water system. On account of the large sandbar in the river, a very slight drop in the stage of the river from a normal stage, leaves us without water and necessitates the laying of several hundred feet of extra pipe to water. This pipe is invariably lost as the river rises.

These sudden rises and falls of the river at certain periods of the year are very uncertain and we are therefore compelled at these times to

use water from an artificial lake located just outside the prison walls. The water from this lake is from surface drainage, and at most times is stagnant and has an obnoxious odor.

Having no filtering plant for the river water, it is generally polluted with mud and sand, making it at most times, unfit for general use and causing trouble with valves and toilets as well as filling fire lines and hydrants with sand and mud.

We would also call attention to the underground water mains. Apparently, when the old mains were abandoned, others were promiscuously laid, making the underground part of system very inefficient.

Water for drinking and culinary purposes is piped from a natural spring, located just outside the prison wall, to a cistern conveniently located inside the prison wall. Should this spring fail to supply the requirements we would be handicapped for water for these purposes.

The water supply and sanitary conditions are discussed in the Physician's report, a copy of which is attached.

With the appropriation of the Fifty-second General Assembly, we expect to overcome the difficulties of the water system, and earnestly recommend that the work and erection of the settling basin and septic tank, begin at the very earliest possible date.

RELIGION AND EDUCATION.

The religious and educational advancement of the prisoners are fully discussed under the Chaplain's report, a copy of which is herewith attached.

BAKE OVENS.

During the year our old bake ovens were entirely rebuilt and are now in first class condition. They provide all the bread for the inmates of the prison and the Chester State Hospital.

INDUSTRIES.

The industries combined have had a very successful year, while some could have made a better showing if they had not been handicapped by market conditions.

The knitting factory has suffered most by the market changes on account of our having a large supply of yarn on hand bought at high prices. The sudden drop of yarn prices left us with a large stock of socks on hand, which it seems we are unable to move at any price. We believe that with up to date knitting machines we could compete on the open market. The old machines are expensive to keep up and slow to work with. Net sales for the year just ending was \$38,232.80 compared with net sales the previous year of \$52,105.13.

The clothing factory shows a large increase, sales being \$161,008.11 compared with net sales of \$147,371.75 the previous year.

The brick department also shows an increase in sales, being \$18,624.07, previous year, \$16,940.57. The number of brick made during the year was 2,250,000. Two new kilns were entirely rebuilt and in order to keep the plant in good condition one kiln will be rebuilt the coming winter.

The stone department shows an increase in sales over the preceding year, the sales for the year just ending being \$46,067.68 and for the previous year \$11,019.32. The new pulverizer plant for agricultural limestone dust is about completed, and when in operation our output should more than double.

The production of the dairy department for the year just ending was \$13,114.08. Preceding year's production was \$7,209.56.

The hog department shows a decrease in sales for the year just ending. Sales this year were \$5,904.78, previous year, \$6,606.88. This was caused by the market decreasing.

Poultry department sales for the year just ending totaled \$1,577.68. This department was not in operation the year previous.

Farm production for the year just ending amounted to \$16,077.58, previous year, \$17,769.60. This shows a decrease, which was caused by market changes.

Crops are in good condition. Some clearing and ditching has been done on the new farm just purchased, but in order to have good crops a great deal of ditching and levee work will have to be done, the hill land or woods part is furnishing the brick department with wood for the kilns.

PERMANENT IMPROVEMENTS.

Permanent improvements contemplated the coming year are the rebuilding of the chain shop into an industrial building, erection of piggery and slaughter house, cottages for physician, farm cottages and buildings, water settling basins and septic tank, and fencing a part of the farm.

REPORT OF PRISON PHYSICIAN.

DR. GEORGE HOFFMAN.

The general sanitary condition of the prison and the general physical condition of the prisoners during the fiscal year have been very satisfactory. The following tabulated report shows in detail the physical and sanitary conditions, and the number and nature of the diseases treated.

SANITATION.

The sanitation of the entire prison is as good as can be expected under the present system of plumbing and sewerage, with the exception of the dry toilets about the prison grounds. The installation of flush toilets throughout the yards would aid greatly in accomplishing our aim

in perfect sanitation. I hereby recommend that flush toilets be installed and the dry toilets taken away.

The cell houses and solitary are inspected and fumigated regularly each month. The air chambers are white washed and fumigated frequently, and semi-annually a solution of sulphur and formaldehyde is placed in the air ducts and thereby distributed to each individual cell.

The clothing and bedding issued to the prisoners is good and ample at all seasons. The beds and cells are sprayed weekly for bed bugs and other vermin. I strongly recommend the removal of the wooden floors of the cell house galleries and replacing same with reinforced concrete floors as an additional precaution against bedbugs.

The solitary and all other buildings that will permit of it, are white-washed and fumigated regularly.

No prisoner who is affected with tuberculosis, syphilis, or any venereal diseases is allowed to work in the store rooms, baker shop, kitchens, hospital, dining room nor any place where food stuffs are handled. The barber shops are furnished with a disinfectant with which to sterilize the razors, mugs, etc., which precaution tends to eliminate infection.

All litter and refuse has been cleared from the premises and a wagon making daily rounds keeps all trash and litter gathered and hauled away.

DIETETIC.

The food furnished the prisoners is of ample quality and quantity to maintain the good physical condition of the prisoners. The food is properly prepared, of a mixed diet, and served in a clean and sanitary manner. The hospital patients are furnished such food as their individual cases demand.

WATER.

The water for drinking and cooking purposes is taken from a well in the prison yard, to which it is piped from the quarry springs. Analysis of this water has shown that it is highly polluted and unfit for use. The Mississippi River water is used for bathing and flushing purposes, but it is generally muddy and very unfit to bathe in. In order to bring the sanitary conditions to such a standard as we would like to have them, it is necessary to have a complete filtering system for all water used and I would recommend the installation of same. At times during the summer the water is taken from a lake on the prison farm, and in this case it is treated two or three times during the summer with copperic sulphid, to prevent the stench.

HOSPITAL.

The hospital is well equipped with modern appliances and has accommodations for thirty-two patients. During the past year we have performed several major and minor operations with the very best of

success. We have had faithful and efficient work in the hospital by the helpers and nurses, all of whom are convicts. All the tuberculous patients are isolated in the tubercular ward, also patients suffering with other contagious diseases. We have had one case of smallpox in the past year. The patient was isolated at once and no other cases developed.

We cannot speak too highly of the work of Dr. McKelvey, State Surgeon. He has been most successful in his work here, having performed several major operations. We can heartily recommend the present arrangements for surgical work, as it is a great saving to the State by using the same instruments at each of the State institutions. An X-ray machine is greatly needed in the hospital work and would be greatly appreciated.

In conclusion, we wish to thank the officers of the institution for their faithful cooperation in the hygienic work of this department. The assistants and deputies have spared neither time nor trouble in assisting us in this work and we feel that we have accomplished a great deal by our efforts.

MORTUARY.

The total number of deaths during the past year was seven. Two of these were from accidental causes. The mortality rate has been very low: Tuberculosis, 2; typhoid fever, 3; accidental, 1; gun shot wound, 1.

DISEASES TREATED AND OPERATIONS PERFORMED.

Chills and fever.....	32	Venereal	2
Indigestion	31	Rheumatism	12
Eyes	5	Lung trouble	3
Ears	3	Tonsillitis	6
Asthma	16	Hernia	7
Sprains	7	Constipation	3
Stricture	4	Fistula	1
Boils	1	Hemorrhoids	2
Tuberculosis	3	Snake bite	1
Neuralgia	5	Smallpox	1
Cuts and wounds	9	Diabetes	1
Piles	9	Conjunctivitis	1
Abscesses	3	Dysentery	2
Sores	7	Infections	2
Paralysis	1	Syphilis	27
Fracture	5	Miscellaneous	25
Nerve trouble	5		

OPERATIONS.

Major	4	Minor	23
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TRANSFERRED TO THE CHESTER STATE HOSPITAL FOR THE INSANE.

Name.	No.	Name.	No.
John Bainbridge	2065	Sam Lott	4901
Wm. Neatherly	4826	Victor Earl Day	4908
Wm. Elliott	4822	Dave Hogan	4713
J. C. Gordon	800	Wiley Pruett	4802
Pete Battasky	4510	Mack Gaurilovitch	3060
Daily average population of prison during year.....			1,015.93
Daily average attendance at hospital during year.....			11.31
Daily average sick call.....			81.13
Daily average sick in cell.....			3.12

REPORT OF PRISON DENTIST.

DR. R. A. TROVILLION.

Beginning on December 1, next, it is the purpose of this department to give a thorough examination of the teeth and mouth of every man in the institution and to do all the work that is necessary, including prophylactic treatment and cleaning. This procedure is to be repeated at least each year and oftener if possible. All new men coming to the prison are to have dental examination and treatment.

The department would like to suggest that tooth brushes and paste be furnished to all the men who are not able to purchase same. At the time of our examination we intend to make a survey of this situation to learn who can purchase brushes and paste and who cannot. We also intend to do everything possible to get the men into the habit of systematically caring for their teeth and mouth. We feel that if we can accomplish our aim in this direction, the general sanitary condition and the health of the patients will be greatly increased.

An X-ray machine that could be accommodated to both the medical and dental use would certainly insure a more scientific method of diagnosis, thereby establishing a higher service to the patient.

This department is badly in need of a new electric lathe for finishing and polishing purposes.

The foregoing aims and needs of the Department are submitted to the Welfare Department for its consideration and approval.

WORK DONE IN DENTAL DEPARTMENT FROM JULY 1, 1920, TO
JUNE 30, 1921.

Gold fillings	26	Bridges	54
Amalgam fillings	296	Crowns and bridges reset.....	10
Cement fillings	56	Full plates	60
Porcelain fillings	28	Partial plates	18
Root canal fillings.....	26	Plates repaired	9
Root canal treatments.....	36	Abscesses lanced	30
Gum treatments	354	Teeth cleaned	148
Extractions	858	Pyorrhea treatment	40
Gold crowns	94		

REPORT OF CHAPLAIN.

REV. JOHN H. BAGWILL.

The regular chapel service is held each Lord's Day at 9:30 a. m. with a good attendance and a splendid interest. It is a very common occurrence to see nearly one-half the men attending the service raising their hand for prayer; many of them have made a profession of Christian faith during the year.

The chaplain is often seen kneeling at the door of some man's cell in the hospital, school room, or solitary, praying for some of the boys.

A real revival spirit has prevailed among us during the year.

A Catholic service is held by the priest at 7 a. m. one Sunday in each month.

Rev. A. G. Dunow conducts service for the Evangelical Lutherans at 7 a. m. one Sunday in each month.

Our splendid music is one of the features of each service. We have a band of from twenty to twenty-five pieces, all prisoners, under the direction of Professor Munal, and a choir of fourteen voices, all prisoners, with Mrs. Huffstuttler at the piano. Prisoners, officers and the many visitors attending our service all alike enjoy each musical program.

In our prison school, which is under the chaplain's supervision, we had an enrollment of 144 during the year, more than two-thirds of them continuing through the entire term. Some of them were not able at the beginning to write their own name, but before the end of the term were writing their own letters to loved ones at home.

For the first time we taught the first eight grades with the assistance of two special prison teachers, Professor Smith and Mr. Graddy—(I think we had never taught above the third grade before). We also had from four to seven of the prisoners teaching classes, and they rendered splendid service. The boys all study their lessons at home and at 12:20 sharp they march into school and are given one hour and thirty minutes for recitation, each day, five days per week. This is an improvement over previous years, as we are giving them an extra half hour each day and an extra day each week.

There is also some additional instruction in vocational training. Some twenty-five or thirty having taken this course.

We have about 5,000 books in the library, most of them for circulation among the prisoners, and that you may know how much this library is appreciated by our boys, you should know that they read 16,600 books during the year. But many of these books are badly worn and are passing into disuse and we hope to replace many of them at an early date.

Wholesome entertainment is also provided for the prisoners. During the summer months, a baseball game is played each Saturday afternoon, with horseshoe pitching and other recreation, and during the winter months moving pictures are enjoyed each Saturday afternoon and on holidays.

The chaplain of this institution also conducts service each Lord's Day at the Chester State Hospital at 11 a. m.

ILLINOIS STATE REFORMATORY.

I. M. LISH, *General Superintendent.*

In compliance with your request I have the honor of submitting the annual report of the General Superintendent of the Illinois State Reformatory for the fiscal year ending June 30, 1921.

On September 1, 1921, by appointment of His Excellency, Governor Len Small, I succeeded James F. Scouller as General Superintendent of this institution; consequently, I am compelled to rely solely upon the records and information obtained from administrative assistants for the subject matter of this report.

INMATES.

During this period 563 inmates were received, which, with the 1,073 already in the institution, made a total of 1,636. Of this number 542 were released, leaving a population of 1,122. Fifty-one per cent of those admitted during the year were from Cook County, and 49 per cent from down State, and the crimes for which commitments were made embrace practically all the known crimes under the State law, except murder in the first degree.

PAROLES.

The parole system under which inmates are released from the reformatory merits high praise. When we consider that nearly 85 per cent of the paroled inmates make good, law-abiding citizens, we have to admit that the merited degree of success which has been accomplished by this method is the strongest proof of the wisdom of the system.

HEALTH.

The health of the inmates has been good. Only three deaths occurred during the year, and two of these were caused by tuberculosis contracted previous to the admission of the inmates to the reformatory. The other death was due to heart trouble.

COMMON SCHOOLS.

Our school is under the direction of a superintendent, assisted by ten instructors. School is in session six days each week of the year. Inmates attend school one-half day and work in the shops the other half. The courses of study are identical with those taught in the public schools.

MORAL AND RELIGIOUS INSTRUCTION.

The Y. M. C. A. holds weekly meetings every Sunday afternoon in the chapel. The religious work of the reformatory is carried on by a Protestant chaplain, a Catholic chaplain and a Jewish rabbi. Chapel services are held every Sunday morning, and Catholic and Jewish services at stated times. Particular attention is given to moral and religious training, and the officers find these services of great value in the matter of discipline.

DISCIPLINE.

The maintaining of proper discipline is a matter to which close observation is given. Each newly received inmate is fully acquainted with what will be expected of him, as well as his associates, and shown how by obedience to the book of rules, which is furnished him upon his admission, he has the opportunity to obtain his release in a much shorter time than otherwise. The new progressive merit system, which was inaugurated in all penal institutions of this State in March, 1920, is working nicely, and is quite an improvement over the old system, inasmuch as it provides for a great deal of personal work with each inmate, and the reports of the institution staff are invaluable to the members of the Division of Pardons and Paroles in assisting them in arriving at a better understanding as to the merits, or demerits of each individual case. With but a few exceptions there is a disposition to observe the rules, it being generally realized that they are a necessity and made for the benefit of all concerned.

INDUSTRIAL DEPARTMENTS.

The industrial departments of the institution, the fibre furniture factory, the print shop and the farm, made an excellent showing during this period. The net profits of these departments, in round numbers, were as follows:

Fibre furniture factory.....	\$20,000
Print shop	3,400
Farm	18,600

The above figures would indicate that through inefficiency or lack of work the print shop had not made good, compared with what the other two departments produced. However, such was not the case. This department was busy all the time, but owing to the fact that its products were sold exclusively to other State institutions, and it operated on a smaller margin of profit, whereas the products from the fibre furniture factory and the farm were disposed of at market prices, its net profits were much less.

MANUAL TRAINING.

The Manual Training Building was destroyed by fire in April, 1919. The Fifty-first General Assembly appropriated the sum of \$50,000 for the replacement of this building, contemplating the erection of another

two-story structure, such as was destroyed. However, after due consideration it was decided to build two one-story fire proof buildings instead. One of these buildings has been completed and is being used as a store. This building is 50 feet wide and 210 feet long. It is of concrete and brick construction, with steel sash, and is absolutely fire proof. The other, the Manual Training Building proper, is nearing completion, and when finished up to date equipment will be installed for instruction in the following trades: Carpentry, Blacksmithing, Plumbing, Steam Fitting, Electrical, Tinner's, Metal Working and Machinist's. This building is also of fire proof construction, and is 50 feet wide by 180 feet long.

CONCLUSION.

In conclusion I desire to express my appreciation of the courtesies extended to me by Governor Small and yourself, and I assure you that I will endeavor to merit your continued friendship and confidence.

ILLINOIS STATE FARM.

GEORGE A. BROWN, *Superintendent.*

The Illinois State Farm is located in Fayette County, Illinois, a purely agricultural section of the State. The farm consists of 1,142 acres, the greater portion of it bottom lands adjacent to the Kaskaskia River and subject to overflow. This part of the farm is partly protected by a small levee, which is being repaired and strengthened as fast as possible.

The soil in this part of the farm is very fertile and will grow abundant crops if protected by proper drainage and levee. There is now about 200 acres of corn on this part of the farm which we estimate will produce about 5,000 bushels. We have a large acreage prepared for wheat. There is a part of this farm lying west of the bottoms composed of hill lands and creek bottom, which I think can be made to produce good crops.

There is also on this land on the banks of the creek a goodly deposit of moulding sand, which is a valuable asset to the farm.

Two miles to the north is part of this farm, 160 acres detached from the main body. Part of this farm is very good and the rest consists of gravel and sand hills which I consider to be valuable.

There has been produced upon the farm this season 1,540 bushels wheat, 550 bushels oats, estimated 5,000 bushels corn, 50 tons of cow peas, 5 tons clover, 10 tons cane and cow peas, 40 tons ensilage, a very good crop of vegetables, which has been consumed by the population of the farm, Superintendent, eight guards, housekeeper and domestic. We have 60 inmates; total, 71.

There are eight farm houses on the farm occupied by the guards and their families. The inmates are prisoners from the penitentiaries of Joliet, Menard and the State Reformatory at Pontiac. These men are placed here upon their honor, having been selected and pledged by the Superintendent of Prisons. The first inmates were brought to the farm in July, 1920. Thus far there have been some escapes. The morale of the inmates has been very good.

The present type of buildings occupied by the population consists of temporary, wooden, one-story buildings, lined with plaster board and heated with stoves. There is no electric light or water pressure at present and scarcely any fire prevention. These matters will be properly attended to.

The live stock on the farm consists of 26 good horses and six mules, 28 head of cattle, about 1,200 chickens, a few ducks and geese, also 150 hogs and pigs.

Report of
THE DEPARTMENT OF PUBLIC HEALTH
July 1, 1920 to June 30, 1921

STATE OF ILLINOIS.
THE DEPARTMENT OF PUBLIC HEALTH.

ISAAC D. RAWLINGS, M. D., *Director*.¹

Office of Assistant Director Vacant.²

AMOS SAWYER, *Chief Clerk*.

DIVISION OF COMMUNICABLE DISEASES.

JOHN J. MCSHANE, M. D., DR. P. H., *Chief*.

DIVISION OF TUBERCULOSIS.

Office of Chief Vacant.²

DIVISION OF SANITATION AND ENGINEERING.

HARRY F. FERGUSON, *Chief Engineer*.

DIVISION OF VITAL STATISTICS.

SHELDON L. HOWARD, *Registrar of Vital Statistics*.

DIVISION OF CHILD HYGIENE AND PUBLIC HEALTH NURSING.

C. W. EAST, M. D., *Chief*.

DIVISION OF SURVEYS AND RURAL HYGIENE.³

BAXTER K. RICHARDSON, *Supervisor of Surveys*.

DIVISION OF DIAGNOSTIC LABORATORIES.

THOMAS G. HULL, M. S., PH. D., *Chief*.

DIVISION OF HOTEL AND LODGING HOUSE INSPECTION.

W. W. McCULLOUGH, *Superintendent*.

DIVISION OF PUBLIC HEALTH INSTRUCTION.

BAXTER K. RICHARDSON, *Chief*.

DIVISION OF SOCIAL HYGIENE.

G. G. TAYLOR, M. D., *Chief*.

¹ Appointed February 2, 1921.

² Dr. George T. Palmer, resigned March 1, 1921.

³ Ceased to function December 1, 1920; later fused with Division of Sanitation and Engineering.

THE DEPARTMENT OF PUBLIC HEALTH.

ISAAC D. RAWLINGS, M. D., *Director.*

The fiscal year ending June 30, 1921, witnessed a number of events that carried with them distinct and pronounced influences over the State Department of Public Health. Not least among these were the inauguration of a Governor committed to a broad public health policy, a change in the directorship of the department and the additional provisions of the Fifty-second General Assembly for public health administration. Dr. Isaac D. Rawlings was appointed Director of Public Health on February 2, 1921, so that the history of the department for the year was divided almost equally under two executive officers. On March 1, the Assistant Director resigned and no new appointment had been made at the end of the fiscal year.

For the first seven months of the year the department was concerned principally with carrying out activities along lines established after the close of the World War. The new Director, however, upon his induction into office, found before him the task of executing new policies outlined in the Governor's inaugural address, as well as the continuation of activities standard in the administration of public health. The problem of handling the situation successfully was complex, embracing as it did the necessity for new legislative action and rather large increases in the personnel.

Broadly speaking, the new administration committed itself as favoring three distinct public health measures, viz: (1) The establishment of full-time medical health officers in every county of the State; (2) the strict enforcement of public health laws already enacted, particularly those relating to the prompt and complete reporting of births and cases of communicable diseases; and (3) an expansion in educational activities with special attention to training schools for home and public health nursing and schools of instruction for health officers.

Another item of no little importance that faced the new Director was the fact that the funds for purchasing antitoxin, a product which the department distributes free to citizens of the State, were completely depleted and the supply of antitoxin entirely exhausted, although the demand for this specific was unusually heavy.

LEGISLATION.

With the Fifty-second General Assembly already in session at the time of his appointment, the Director soon succeeded in securing an

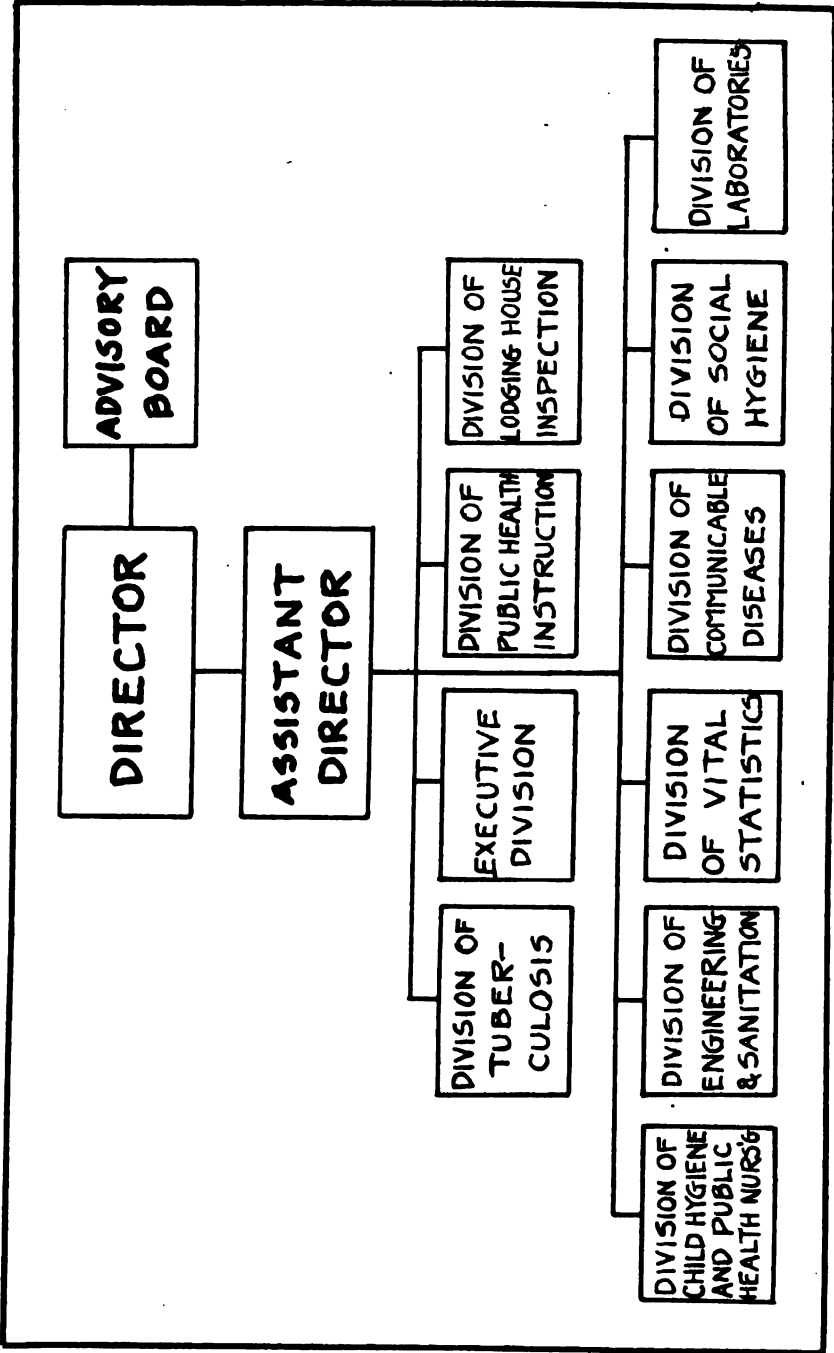


Figure 1.—Departmental Organization for Biennium, 1921-23.

emergency appropriation of \$30,000 for the purchase of antitoxin. The wisdom of this measure was demonstrated during the remaining part of the year when diphtheria was rather unusually prevalent and almost the entire sum was expended for the purchase and distribution of antitoxin in quantities commensurate with the demand.

This emergency appropriation being disposed of efforts were made at once to secure legislative action necessary to the success of new measures for health protection. To this end a bill was drafted and a campaign launched to put upon the statute books a law providing for the employment, from State funds, of a full-time medical health officer in every county of the State. The same bill carried provision whereby counties would be authorized to employ additional personnel, establish quarters and purchase equipment necessary for a well rounded and efficient public health service. While this bill failed to be enacted, its passage in the Senate with but one dissenting vote and introduction in the House demonstrated so much favorable public opinion for an extension of public health service that a substitute budget item was embodied in the appropriation to the department. The substitute provides funds for maintaining 25 district health superintendents, or an increase of 20 over former years. This will permit a considerable extension of service and will give the people a much more satisfactory public health administration than formerly, but in no sense does it offer the possibilities for practical results that could have been obtained under the original bill. In addition to these things, the legislature set aside an increase over the last biennium of \$100,000 for social hygiene service to replace a similar amount formerly provided by Federal grant. This came at a time when Federal aid for this work had been withdrawn and further progress or even the continuation of anti-venereal disease work already begun would have suffered a severe set-back without the increased appropriation. A general increase in salaries was also granted so that employees of the department will enjoy, during the next two years, incomes more justly comparable with those of the industrial world. The total appropriation to the Department of Public Health for the next biennium amounts to \$1,083,759, compared with \$660,610 for the last biennium. It corresponds to an annual per capita appropriation of about 8½ cents.

ENFORCEMENT OF VITAL STATISTICS LAWS.

Besides these efforts to secure the enactment of laws and needed appropriations no little time was consumed during the last five months of the fiscal year in developing practical means for enforcing the vital statistics laws and expanding the educational functions of the department. With particular emphasis on the registration of births and the reporting of communicable disease cases the Director has sought especially the cooperation of the medical profession. To this end he has delivered addresses before the State and many local medical societies, and has

held numerous conferences in Springfield and elsewhere in Illinois. At the close of the year the future is full of promise for bringing about birth registration sufficiently satisfactory to gain admission into the United States registration area for births and the probability for early success seems very reassuring.

COOPERATION.

Points of contact for cooperating with governmental and extra-governmental agencies engaged in work of a public health nature have been created or welded more firmly together. These include the powerful national organizations as well as State and local. Policies in reference to coordinating the work of some of these agencies with that of the department have been formed with the purpose of rendering in local communities a well balanced public health service free from over-emphasis of any particular task and without greater expense than many localities now bear. The proposition of cooperation has not been initiated in all cases by the department and neither has it been limited to agencies, the purpose of which is largely public health work. On the other hand the accomplishments of the department, especially in the field of child and infant care, have helped stimulate such organizations as the Shriners, International Rotary Association, various units of the Traveling Men's Protective Association, life insurance companies of national character and various women's institutions to take an active interest in these important activities. That the service of the department has attracted the cooperation and commendation of such powerful and practical organizations as these seems indeed important and worthy of mention.

EDUCATION.

More immediate results have attended the efforts of the department directed toward an expansion of educational activities. The monthly bulletin of the department has not only been converted into a popular and practical publication that has elicited the unqualified praise of physicians, public health workers and laymen alike, but it has been issued promptly each month since February. Hardly less important has been the addition to the loan service of considerable exhibit material, designed by the department and constructed under its supervision. This material consists of models and other devices that graphically portray certain fundamental principles in preventive medicine and are so constructed as to permit easy transportation from one point to another.

DEPARTMENTAL ORGANIZATION.

Within the department a number of minor but important changes have been made under the new Director. Perhaps the most far reaching of these was the innovation of weekly conferences with the division chiefs which has brought about an intra-departmental cooperation and coordination not heretofore realized. At these meetings the policy and

problems of the department are discussed and lines of action are determined. The chiefs, are, therefore, able to acquire a clear insight into the activities and problems of the department as a whole and of the various individual divisions so that vague and hazy notions are replaced by an active knowledge of purpose and policy. A weekly conference of this kind is all the more useful and necessary because the department has long since outgrown its original quarters and the several divisions are scattered throughout the Capitol Building and in the business section of Springfield.

One of the weekly conferences each month is devoted to a discussion and study of current public health literature. The periodicals for which the department subscribes (24 in number), as well as various reports and publications received through an exchange of such service, are assigned to the different division chiefs who abstract all of the more important articles. These abstracts are read and discussed at the meeting. In this way all members of the department keep informed along all lines of activities in the field of public health and are kept abreast of the times in reference to new procedures.

During the latter part of the fiscal year the adoption of a completely new set of executive regulations that govern the functioning of the department has had the effect of binding together still more closely its various units and of keeping the Director in close contact with all activities. For the purpose of convenience and efficiency a few changes in the former division organization have been made. At the close of the year the division arrangement established was as follows:

- Executive Division;
- Division of Communicable Diseases;
- Division of Tuberculosis;
- Division of Sanitation and Engineering;
- Division of Vital Statistics;
- Division of Child Hygiene and Public Health Nursing;
- Division of Diagnostic, Biologic and Research Laboratories;
- Division of Public Health Instruction;
- Division of Social Hygiene;
- Division of Lodging House Inspection.

Several of the divisions have not been manned to full force but the provisions of the Fifty-second General Assembly have opened the way for securing a personnel for each that will reasonably meet the requirements for work mapped out.

Even with the limited personnel the divisions in almost every case show an increase in activities over former years and some have undertaken and accomplished a great deal along new lines of endeavor. The Division of Sanitation absorbed that of surveys and rural hygiene so that all sanitary service, whether in the nature of routine or research, now comes under the supervision of the chief sanitary engineer. No

important reorganization changes have been made other than that of the executive officer and his assistant, although there were several transfers and additions in the department personnel.

RULES AND REGULATIONS FOR CONTROLLING DISEASE.

Toward the close of the year a complete revision of the rules and regulations governing the quarantine and control of communicable diseases was accomplished. A number of important changes were made so that the regulations are now in keeping with the latest and most scientific thought, while cities with well qualified and efficient health departments can enjoy a considerable amount of freedom in the matter of quarantine. While only Chicago and possibly one or two other municipalities are at present eligible to exercise the responsibilities of this modified regulation it is believed that many cities will be stimulated to qualify under the provisions required. Preparation has been made to publish the new rules and regulations in attractive pamphlet form and to supplement them with a number of special pamphlets, the material for which is ready for the printer. Public demands for educational matter of this kind have been increasingly strong and it is felt that through its widespread distribution great good can be accomplished.

A State law empowers the State Department of Registration and Education to adopt and enforce rules providing for the sanitary regulation of barber shops but prior to the adoption of such rules they must be approved by the State Department of Public Health. During the term of office of the present Director of Public Health a set of such rules, that had awaited the approval of the department for several years, were approved and are now in force.

By and large, Illinois has experienced a healthful year. No severe epidemic of serious proportions has appeared. The State has enjoyed one of the lowest mortality rates ever recorded. These things, together with the activities of the department for the year are discussed in detail in the division reports on the following pages.

EXECUTIVE DIVISION.

AMOS SAWYER, *Chief Clerk.*

The Executive Division of the State Department of Public Health is made up of the chief clerk and a staff of accountants and clerks as shown in the organization chart below. This division is charged with the general supervision of the clerical and stenographic force of all divisions and the records that pertain thereto. The status of the chief clerk is that of executive secretary of the department. In this capacity he is consulted, in the absence of the Director, by heads of divisions in reference to special important matters or emergencies requiring immediate attention. He also exercises supervision over pay rolls, accounts, contracts and other departmental records and the purchase and inventory of furniture and supplies.

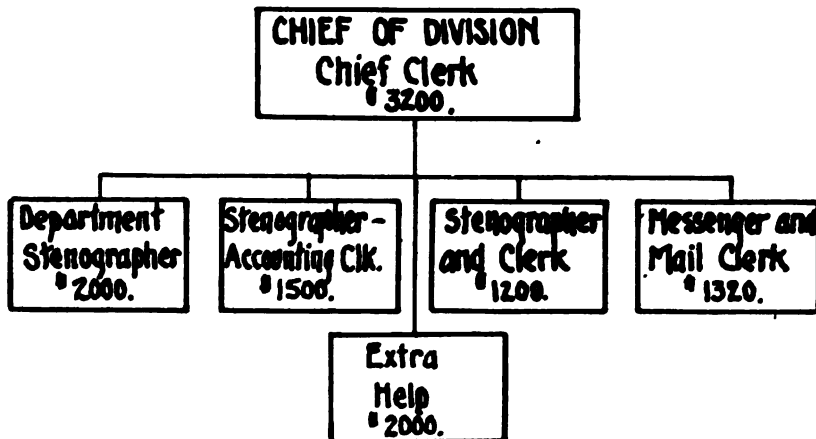


Figure II—Divisional Organization for Biennium, 1921-23.

During the fiscal year a number of unusual financial problems have presented themselves. The Fifty-first General Assembly made appropriations for several technical positions in the department that have not been filled. This is explained by the fact that unforeseen and extraordinary advances in salary scales swept the country so that the maximum salaries specified for these technical positions were not large enough to attract persons of proper qualifications and experience. The result has been that several divisions have not been able to secure the anticipated

personnel and consequently have not expanded in proportion to public demands for service. This has been especially true of the Divisions of Laboratories, Sanitation, Communicable Diseases and Child Hygiene and Public Health Nursing.

Another problem was that relating to the purchase of antitoxin for free distribution. Funds for this purpose were entirely exhausted long before the close of the year. Fortunately, however, the Fifty-second General Assembly was in session at the time and an emergency appropriation of \$30,000 gave relief in this instance.

During the year a great deal of time was devoted by the Executive Division to the preparation and presentation of the department budget for the coming biennium. All divisions were required to submit estimates for the period in conformity with the probable needs in each case. On the basis of these, together with due consideration to plans for new fields of service and the probable withdrawal of Federal aid in some cases, a practical budget was compiled and presented to the Department of Finance. All items contained therein were the result of careful study and painstaking consideration.

The other work of the division during the year has been along lines established in the past. No particularly difficult problems have arisen in this respect. On several occasions, particularly in connection with the exhibit at the State Fair, the annual Better Babies Conference and the campaign during Health Promotion Week it has been necessary to engage extra help of various kinds. These matters have been attended to with dispatch and in a manner that has proved entirely satisfactory.

The routine work of the division has been kept in good shape. All accounts of the department have been recorded in the proper way and are open to inspection by authorized persons at all times. Executive orders originating from the Director have been communicated to the various members of the department and contact with other organizations and the public has been maintained in a diplomatic and satisfactory manner.

TABLE I.
Tabular Form.
FINANCIAL STATEMENT OF THE DEPARTMENT OF PUBLIC HEALTH FOR THE CLOSING
BIENNium.

GENERAL OFFICE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$27,560	\$23,958	\$3,602
Salaries and wages from contingent.....		1,276	
Office expense.....	2,359	2,232	127
Office expense from contingent.....		176	
Travel.....	5,200	4,939	261
Operation.....	150	73	77
Operation from contingent.....		1,062	
Repairs.....	130	760	—630
Repairs from contingent.....		106	
Equipment.....	900	209	691
Equipment from contingent.....		1,578	
Contingent.....	7,200	*(4,198)	3,002
Sub-total.....	\$43,499	\$36,369	\$7,130
Printing.....	35,000	34,087	913
Total.....	\$78,499	\$70,456	\$8,043

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

COMMUNICABLE DISEASES.

Salaries and wages.....	\$78,080	\$66,795	\$11,285
Office expense.....	3,892	3,762	130
Travel.....	28,000	23,041	4,959
Operation.....	220	155	65
Repairs.....	155	240	—85
Equipment.....	635	624	11
Total.....	\$110,982	\$94,617	\$16,365

Receipts from all sources July 1, 1919, to June 30, 1921, \$211.00.

DIAGNOSTIC LABORATORY.

Salaries and wages.....	\$17,760	\$13,153	\$4,607
Office expense.....	1,089	913	176
Travel.....	1,400	382	1,018
Operation.....	7,063	9,509	—2,446
Repairs.....	534	110	424
Equipment.....	1,050	1,150	—100
Total.....	\$28,896	\$25,217	\$3,679

Receipts from all sources July 1, 1919, to June 30, 1921, none.

TUBERCULOSIS.

Salaries and wages.....	\$2,640		\$2,640
Office expense.....	725	\$ 658	67
Travel.....	4,000	1,054	2,946
Operation.....	20	5	15
Equipment.....	150	6	144
Total.....	\$7,535	\$1,723	\$5,812

Receipts from all sources July 1, 1919, to June 30, 1921, none.

THE DEPARTMENT OF HEALTH.

TABLE I—Continued.

SANITATION.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$44,180	\$41,788	\$2,372
Office expense.....	2,300	2,237	63
Travel.....	11,000	6,402	4,598
Operation.....	1,840	2,263	423
Repairs.....	718	565	151
Equipment.....	1,690	1,981	321
Total.....	\$61,676	\$55,236	\$6,440

Receipts from all sources July 1, 1919, to June 30, 1921, none.

VITAL STATISTICS.

Salaries and wages.....	\$46,120	\$45,717	\$ 403
Office expense.....	4,120	3,949	171
Travel.....	9,700	6,727	2,973
Operation.....	15	-----	15
Repairs.....	290	449	159
Equipment.....	1,270	1,182	118
Total.....	\$61,515	\$57,994	\$3,521

Receipts from all sources July 1, 1919, to June 30, 1921, \$157.53.

LODGING HOUSE INSPECTION.

Salaries and wages.....	\$21,000	\$19,081	\$1,919
Office expense.....	2,950	2,734	216
Travel.....	300	157	143
Operation.....	15	-----	15
Repairs.....	10	1	9
Equipment.....	50	-----	50
Total.....	\$24,325	\$21,973	\$2,352

Receipts from all sources July 1, 1919, to June 30, 1921, \$50.00.

BIOLOGICAL LABORATORY.

Salaries and wages.....	\$16,160	\$14,185	\$ 1,975
Office expense.....	1,200	854	346
Travel.....	1,100	238	862
Operation.....	85,221	71,861	13,360
† Operation, emergency.....	30,000	29,912	88
Repairs.....	370	317	53
Equipment.....	1,500	966	534
Total.....	\$135,551	\$118,333	\$17,218

Receipts from all sources July 1, 1919, to June 30, 1921, \$289.27.

† Appropriated by the Fifty-second General Assembly.

TABLE I—Continued.

SURVEYS AND RURAL HYGIENE.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$10,200	\$9,931	\$ 269
Office expense.....	250	44	206
Travel.....	5,500	2,724	2,776
Operation.....	800	452	408
Repairs.....	110	72	38
Equipment.....	480	342	138
Total.....	\$17,400	\$13,565	\$3,835

Receipts from all sources July 1, 1919, to June 30, 1921. none.

PUBLIC HEALTH INSTRUCTION.

Salaries and wages.....	\$9,440	\$8,773	\$667
Office expense.....	2,165	3,134	—969
Travel.....	800	672	128
Operation.....	506	183	323
Repairs.....	1,260	1,081	179
Equipment.....	1,260	1,488	—228
Total.....	\$15,431	\$15,331	\$100

Receipts from all sources July 1, 1919, to June 30, 1921, none.

SOCIAL HYGIENE.

Salaries and wages.....	\$30,000	\$30,000	—
Salaries and wages from contingent.....		3,925	—
Salaries and wages from contingent, emergency.....		3,245	—
Office expense.....	10,000	9,000	\$1,000
Travel.....	12,000	12,000	—
Travel from contingent.....		2,049	—
Travel from contingent, emergency.....		382	—
Operation.....	19,000	19,000	—
Operation from contingent.....		9,420	—
Operation from contingent, emergency.....		963	—
Repairs.....	3,600	1,900	1,700
Repairs from contingent.....		6	—
Equipment.....	10,000	8,000	2,000
Contingent.....	15,400	*(15,400)	—
†Contingent, emergency.....	4,700	*(4,700)	—
Total.....	\$104,700	\$100,000	\$4,700

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

†Appropriated by Fifty-second General Assembly.

CHILD HYGIENE AND PUBLIC HEALTH NURSING.

Salaries and wages.....	\$22,480	\$21,522	\$ 958
Salaries and wages from contingent.....		1,974	—
Office expense.....	550	542	8
Office expense from contingent.....		367	—
Travel.....	16,800	13,647	3,153
Travel from contingent.....		649	—
Operation.....	180	46	134
Repairs.....	25	—	25
Equipment.....	265	254	11
Contingent.....	4,800	*(2,990)	1,810
Total.....	\$45,100	\$39,001	\$6,099

Receipts from all sources July 1, 1919, to June 30, 1921, none.

* Not included in total.

THE DEPARTMENT OF HEALTH.

TABLE I—Concluded.

RABIES.

Appropriated for.	Entire appropriation for biennium July 1, 1919, to June 30, 1921.	Bills paid.	Amount lapsed Sept. 30, 1921.
Salaries and wages.....	\$4,000	\$2,522	\$1,478
Total.....	\$4,000	\$2,522	\$1,478

Receipts from all sources July 1, 1919, to June 30, 1921, none.

SOCIAL HYGIENE (FEDERAL)

Salaries and wages.....	Lump sum appropriation	\$54,897	.....
Office expense.....		4,023	.....
Travel.....		7,485	.....
Operation.....		24,683	.....
Repairs.....		1,020	.....
Equipment.....		5,892	.....
Total.....	\$100,000	\$100,000	.....

Receipts from all sources July 1, 1919, to June 30, 1921, none.

** RECAPITULATION.

Salaries and wages.....	\$329,600	\$297,425	\$32,175
Salaries and wages from contingent.....		10,820	
Office expense.....	31,600	30,089	1,541
Office expense from contingent.....		643	
Travel.....	95,800	71,983	23,817
Travel from contingent.....		8,096	
Operation.....	145,090	133,459	11,631
Operation from contingent.....		11,445	
Repairs.....	7,200	8,496	1,706
Repairs from contingent.....		112	
Equipment.....	19,220	16,172	3,048
Equipment from contingent.....		1,578	
Contingent.....	32,100	*(27,288)	4,812
Sub-total.....	\$660,610	\$581,881	\$78,729
Printing.....	35,000	34,087	913
Sub-total.....	\$695,610	\$615,968	\$79,642
Salaries, State officers.....	25,200	24,000	1,200
Total.....	\$720,810	\$639,968	\$80,842

Receipts from all sources July 1, 1919, to June 30, 1921, \$707.80.

* Not included in total.

** Federal Social Hygiene not included in recapitulation.

DIVISION OF COMMUNICABLE DISEASES.

JOHN J. McSHANE, M. D., DR. P. H., *Chief.*

There was a grand total of 183,457 cases of communicable diseases reported to the State Department of Public Health during the fiscal year 1920-1921. During this year the field men have been unusually busy responding to calls in different localities within their respective districts. It was impossible for the limited number of field men to give their attention to all the calls requesting their help. The reason for the unusual number of calls year after year is due in greater part to the lack of proper local health administration. One can easily understand this when one realizes that there are more than 2,752 health jurisdictions in Illinois and 1,600 of these are each under the direction of the local supervisor of a township and the remainder is made up, in round numbers, of 800 laymen and 400 physicians making a total of 2,400 laymen who are supposed to look after the health of the community they represent.

It is almost beyond belief that there are still some cities in Illinois today which have no accurate means of knowing the number of people who die each year, or the number of infants born, or whether such infants live or die, and if they die, the cause of death. This, of course, is due in part to improper registration.

It is an established fact that only through proper reporting of communicable diseases, and the proper reporting of deaths, births and marriages, that the control of communicable diseases and intensive health work can be well done in any community, for such numerical registration really forms an indispensable basis of public health work, and our chief source of such information is the practicing physician. Hence, the laxity on the part of physicians has a great deal to do with the non-control of communicable diseases. Take for instance tuberculosis and typhoid fever, where for the former there is only a modified quarantine and isolation and a modified type of quarantine in the latter, still how few cases are reported to the health department. In many cases the only reports we get from some communities are the original certificates of death. -Therefore, how necessary is the cooperation of the practicing physicians. They can be of immeasurable value, or they can be an obstruction to the development and promotion of public health efficiency.

If local communities would only spend one-half the time and energy supervising scarlet fever, diphtheria, tuberculosis, summer diarrhoea, gonorrhoea and syphilis that they do looking after rubbish piles and other

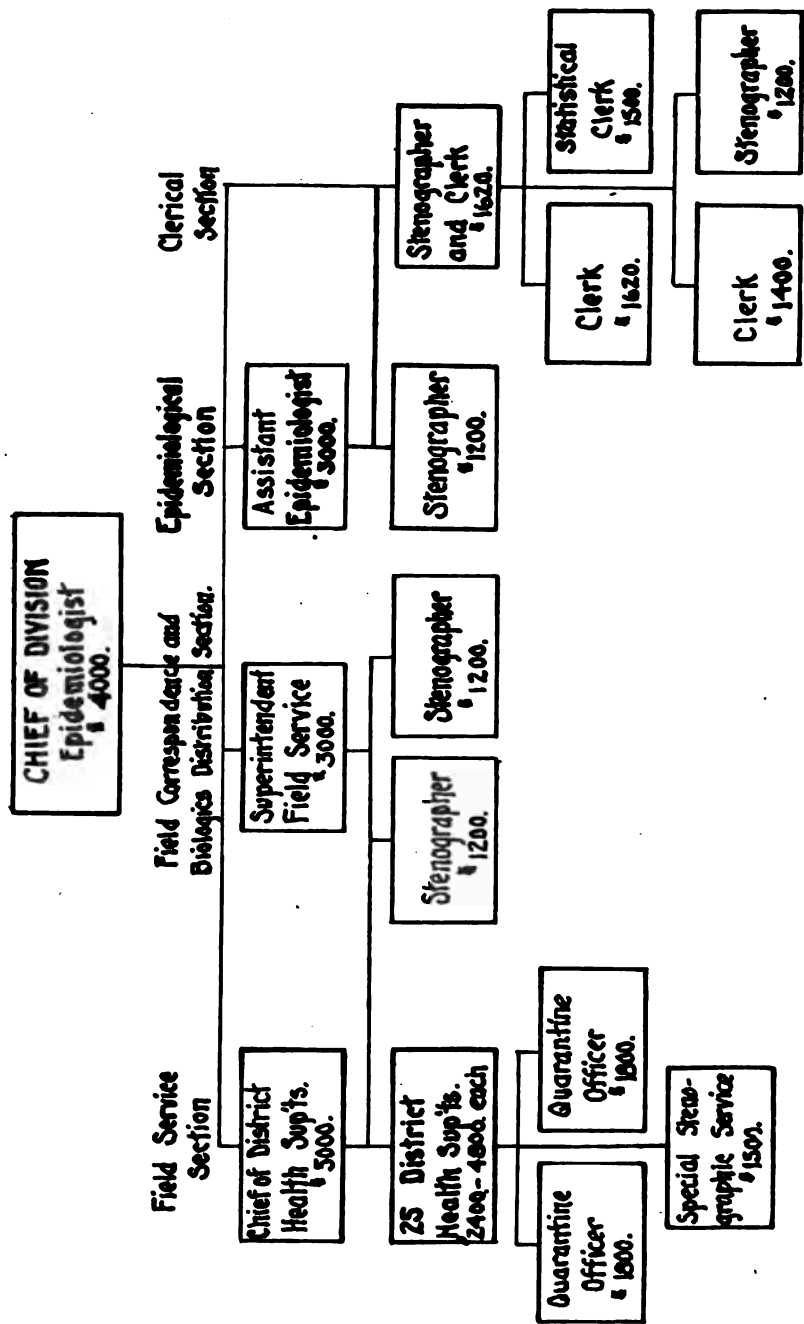


Figure III—Divisional Organization for Blennium, 1921-23.

nuisances—doing intensive work along these lines—more headway would be made in abolishing these diseases. I do not mean to say that rubbish piles and the like should not be taken care of, for we know that a clean city makes for higher ideals among its citizens, and when people have civic pride many things are accomplished that are not accomplished unless this is the case.

“Health has ever been recognized as the chief basis of wealth and happiness, and in this age is the subject of a science and administrative practice of its own.” Hence, we find the Statesman Disraeli affirming that “the conservation of public health is the first duty of the statesman.” It was thought in the past that only the weaklings suffered from infection or communicable diseases. If this were true, disease long ago would have taken such a toll that only those of physical perfection would be left, but we know this is not true for in our armies men who pass the most rigid examinations and are specimens of physical perfection succumb to pneumonia, meningitis and other communicable diseases.

As has been said modern public health recognizes that health means much more than the mere absence of disease, and under hygiene includes all measures taken to secure the best internal workings of the human frame to keep it at its best, thus eliminating the internal poisonings and the results of deprivations and excesses which produce certain diseases and disabilities. Public health recognizes further that surroundings, through direct action on the body, whether perfect or imperfect, may injure or destroy it, and under sanitation strives to provide surroundings which may eliminate external conditions leading to disease or injury.

The chief advance in public health of recent years is that which recognizes specifically the cause and effect, both in hygiene and sanitation, and meets each separate source or cause of each such trouble with a specific measure to prevent it. As has been said by Dr. H. W. Hill the old public health was concerned with the environment; the new is concerned with the individual. The old sought the sources of infectious diseases in the surroundings of the man; the new finds them in the man himself. The old sought the sources in every place except where they really are. The new seeks these sources and finds them in persons or animals carrying infection, whose dejecta or other discharges enter the body of other persons. The old public health was continually looking for the sources in bad smells, stagnant water, smoke, garbage, sewer gas, defective plumbing, old rubbish piles, and these in times gone by were supposed to be the starting point of epidemics.

More than once have I been told that the patient contracted typhoid fever from eating fruit or vegetables that had been stored in a damp cellar, or possibly from sewer gas, etc., and a case of scarlet fever came from some clothes that had not been fumigated months or years before; that malaria came from dampness.

The new public health today sees in the garbage pail and the manure pile a place for flies to breed, which carry infection if their bodies are contaminated with discharges from persons suffering from communicable diseases.

In swamps it sees a place for the malaria and yellow fever mosquito to breed, for we know that both malaria and yellow fever are transmitted by the bite of the mosquito.

In the past if there was only one employee in the health department he must be a sanitary inspector who condemned everything in sight and in most cases these were secondary in importance to the very things that should have been corrected. The average sanitary inspector will make great complaint and cry about garbage and the like not being properly cared for, yet pays no attention as to whether the milk man is delivering milk containing typhoid germs, or milk infected with scarlet fever: that often is his last thought, if he has one at all on the subject.

The modern trained public health official cares nothing, so far as the restriction of disease and death is concerned, for the dirty back yard or the damp cellar in themselves, but only in so far as these enter into the transmission of infected discharges. Then, at once, they become vitally important. The sanitary inspection of the modern sanitarian, so far as it relates to infection, begins and usually ends with a search for (a) the infected individual. (b) the routes of spread of infection from that individual. (c) the routes of spread of the ordinary excreta of ordinary uninfected individuals to the mouths of their ordinary associates in ordinary life.

Dr. H. W. Hill says the most important group of duties falling to the health authorities is that under the head of communicable diseases. I will use Rosenau's classification:

1. Diseases spread largely through secretions or discharges from the nose, throat and mouth.
2. Diseases spread largely through the excreta.
3. Diseases spread by insects and vermin.
4. Diseases having specific preventive measures.
5. Miscellaneous diseases.

As Dr. Hill says, infective or communicable diseases are infectious or communicable because they are due to the growth, in the body of minute animal or vegetable forms (germs), the transmissibility of these germs from body to body being the sole explanation of why diseases are catching.

Wherever germs develop in the body they leave it chiefly in the discharges or by routes of discharges such as the nose and throat, bladder or bowel, i. e., from the main orifices of the body. We must not qualify this statement and say that smallpox, leprosy, some forms of tuberculosis are transferred from skin lesions, or that venereal diseases are transferred by insects tapping the blood.

The discharges infect practically any person who takes the discharges in some form into the mouth, or who has trachoma and venereal diseases.

Modern public health recognizes therefore that most of the communicable diseases are derived directly from infected persons and not so much from infected things, except recently infected water, milk, food or flies.

The routes by which the discharges of the sick person pass to the well person are exactly those by which the same discharges pass from the well person to the well person in ordinary life. For nose and mouth discharges, the routes are mouth spray and sputum, conveyed through direct contact (as kissing, etc.). For bowel and bladder discharges the hands form the route. These become infected and in turn, either directly or indirectly, infect matter that finds its way to the mouth. Water supplies are peculiar because bowel and bladder discharges en-masse, in form of sewage, often enter them directly, at times being deliberately poured into them:

The relative importance of those various routes in the carriage of infection varies much. The amount and freshness of the discharges, the number and virulence of the germs which they contain, the size and frequency of the dose, and the number of susceptible persons who are dosed, must always be considered. Almost all the infectious disease germs die out quickly when exposed to direct sunlight, and fairly rapid in diffused sunlight. Hence, as a rule, things succeed in conveying infection only somewhat directly from the infector to the infectee, and practically only during the limited period when the germs are still fresh and moist.

These new principles place at the head of official public health activities the search for, and the supervision of infected persons, and the control of infected discharges for the purpose of excluding them from the mouths and also from food and drink.

In Illinois we will never have proper health administration until we can cut down the 2,752 health jurisdictions into a workable number of districts with a full-time medical health officer and qualified assistant personnel to look after the preventive work in each.

In the last session of the legislature a full-time county health officer bill was offered by the department and passed by the Senate with only one dissenting vote but it unfortunately died in the committee of the House. Had this bill been passed it would have been a great stride toward giving all communities in the State proper health administration which they lack at the present time. The Director of the State Department of Public Health, knowing the need of a great many communities in the State, decided something must be done to prevent, in part, the needless waste of human lives and was successful in having appropriations made for twenty additional full-time district health superintendents. The State will be divided into districts. Each district will be served by a full-time district health superintendent who will give his

whole time to the work of supervising the public health work in his respective district.

TABLE 2—MORBIDITY AND MORTALITY FOR PREVENTABLE DISEASES REPORTED FOR PERIOD 1917-1921. (Fiscal years).

	1917-1918		1918-1919		1919-1920		1920-1921	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	1,963	581	1,199	462	2,293	386	1,787	370
Malaria.....	1,996	115	199	77	2,011	107	1,365	78
Smallpox.....	4,575	15	3,028	9	7,807	8	10,928	29
Measles.....	29,191	351	19,165	276	33,535	429	33,676	353
Scarlet fever.....	5,904	251	4,140	162	16,810	324	19,765	261
Whooping cough.....	14,306	708	7,214	424	13,275	444	16,165	549
Diphtheria.....	11,069	1,527	7,789	978	12,876	1,061	16,764	1,243
Influenza.....			284,142	22,207	170,954	5,661	3,056	597
Tuberculosis (all forms).....	19,703	8,402	15,909	7,820	18,286	6,741	13,265	5,594
Meningitis epidemic.....	531	240	171	92	272	95	193	63
Poliomyelitis.....	867	328	265	120	364	101	303	66
Pneumonia.....	5,458	8,277	20,097	13,626	18,276	8,118	8,976	4,948

TYPHOID FEVER.

During the fiscal year there were reported 1,787 cases of typhoid fever as compared with 2,293 for 1919-1920; 1,199 for 1918-1919 and 1,963 for 1917-1918. For the year 1920-1921 there were reported 370 deaths from this disease against 386 for 1919-1920; 462 for 1918-1919 and 581 for 1917-1918. As will be noted from the number of deaths compared with the number of cases for the different years, all typhoid fever cases were not reported. It is indeed gratifying to note the reduction in deaths from typhoid fever during the past four years; each year there being a decrease from the previous one. During the year the district health officers in their typhoid investigations discovered a number of carriers.

Three rather severe epidemics of typhoid fever occurred during July, August and September of the last fiscal year. The first, which resulted in about seventy-five cases and a number of deaths, occurred at Fountain Green. This epidemic dates, it appears, from a church ice cream supper which was held July 2. On this occasion ice cream was served from four different freezers, one of which contained chocolate ice cream. All persons subsequently developing a continued fever resembling typhoid fever or paratyphoid fever symptomatically, ate of the chocolate ice cream while none of those partaking exclusively of the plain cream became ill. All other probable sources of infection were excluded because of the lack of anything in common to all patients. Later investigation showed that there was a carrier among the personnel of the dairy supplying the milk used in making the chocolate ice cream. Circumstantially this carrier appears to have been the source of infection. It is unfortunate, however, that more complete work could not have been done by the field worker and the laboratory since it appears that there

may have been a double source of infection, possibly not suspected at the time of investigation.

The second epidemic of typhoid fever referred to occurred at Tuscola. The outstanding fact in this epidemic was the large proportion of secondary cases, there having been about three secondary cases to each primary one. The investigator reported that the town of Tuscola and the surrounding country is low-lying territory with sanitary conditions very bad. He further stated that this community had an outbreak of typhoid fever, consisting of some 130 cases, four years before, and that a few cases had occurred each summer since the time of that epidemic. It was concluded after careful investigation that multiple well infection, probably emanating from carriers of typhoid bacillus, was responsible for the primary cases in this epidemic, the secondary cases being due to the lack of proper care of the patients and the disposal of their excreta.

The third epidemic occurred in White County during July with about sixty cases of typhoid fever, of which about fifteen cases were reported from Carmi. Investigation proved that the outbreak was water-borne.

In the spring of 1921 typhoid fever occurred in Charleston and the cases were traced to a carrier.

TYPHOID FEVER (Calendar years).

	1916	1917	1918	1919	1920
January.....	210	108	55	33	124
February.....	310	180	89	33	80
March.....	319	110	82	39	88
April.....	118	211	55	47	115
May.....	219	93	52	32	103
June.....	238	68	51	64	138
July.....	327	186	212	265	162
August.....	577	405	241	294	211
September.....	547	637	286	306	284
October.....	413	193	102	346	257
November.....	374	193	24	251	198
December.....	139	94	86	183	109
Total.....	3,791	2,478	1,335	1,893	1,869



Figure IV—Reported Cases of Typhoid Fever.

TYPHOID FEVER.
(Morbidity, Mortality and Fatality Rates.)

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	U. S. Mortality.	Fatality rate (percent reported cases).
1917-18.....	6,310,856	1,963	581	33.1	9.2	12.5	27.7
1918-19.....	6,398,068	1,199	462	18.7	7.1	9.2	38.1
1919-20.....	6,485,280	2,293	386	35.3	5.9	7.8	16.8
1920-21.....	6,572,492	1,787	370	27.1	5.6	-----	20.7

MALARIA.

In checking over the morbidity reports for the past four years we note that in 1920-1921 there were 1,365 cases of malaria reported with 76 deaths; 2,011 cases reported for 1919-1920 with 107 deaths; 199 cases for 1918-1919 with 77 deaths and 1,996 cases for 1917-1918 with 115 deaths.

It has been found that the mortality rate if compared with the case rate is about one to every three hundred. In figuring a ratio of cases as per death reports it will be noted that for the year 1920-1921 there should have been reported 22,800 cases; for 1919-1920, 32,100 cases; for 1918-1919, 22,100 cases; and for 1917-1918, 44,500 cases.

In checking over the mortality rate from the different counties in Illinois it is found that seventy deaths from malaria occurred in a small group of counties in southern Illinois. From the above statistics it will be readily seen that southern Illinois has entirely too many cases of malaria and only a very small proportion of the cases are reported.

The counties reporting the largest number of cases are as follows: Bureau, 70; Clay, 18; Clinton, 139; Jackson, 29; Franklin, 118; Gallatin, 17; Hardin, 13; McLean, 78; Pike, 66; Pulaski, 70; Saline, 59; Williamson, 64; Union, 186.

SMALLPOX.

During the past year there were reported to the Illinois Department of Public Health 10,928 cases of smallpox, the largest number that has ever been reported in one year in this State. It is surely a sad commentary on local public health administration in this great State of ours when smallpox is prevalent in such proportions as has been noted above.

The above number of reported cases does not represent the actual number of cases that occurred during the year, as subsequent cases occurring after the original cases on the premises many times are not reported. Smallpox will continue to occur until such time as the people of Illinois awaken and realize that to be protected against smallpox one must be successfully vaccinated. If all the children were vaccinated at the beginning of their school life it would only be a short time until smallpox would be wiped out of our State. One can easily understand how smallpox can get a foothold in a community when in many com-

munities less than 10 per cent of the population is protected by vaccination.

During the past year the district health officers investigated over one hundred and two outbreaks of smallpox. The largest outbreaks occurred in the following named places. The figures indicate the number of cases reported in each case: East St. Louis, 503; Streator, 80; Ottawa, 106; Freeport, 129; Plainfield, 50; Cooksville, 34; Moline, 72; Rock Island, 102; Rockford, 521; Jackson County 402, of which 107 were reported from Murphysboro; McLean County 410, of which Bloomington had 158 and Williamson County 619.

SMALLPOX.
(Calendar years.)

	1916	1917	1918	1919	1920
January.....	306	490	742	322	776
February.....	395	715	744	284	842
March.....	521	499	645	465	748
April.....	416	653	557	567	1,063
May.....	402	826	571	554	1,232
June.....	241	401	189	442	909
July.....	123	312	103	183	383
August.....	15	114	73	135	212
September.....	32	146	26	232	198
October.....	196	168	42	260	326
November.....	339	93	36	648	553
December.....	399	292	114	779	1,294
Total.....	3,385	4,709	3,842	4,871	8,536



Figure V—Reported Cases of Smallpox.

SMALLPOX.
(Morbidity, mortality and fatality rates.)

Fiscal years.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rate (percent reported cases).
1917-18.....	6,310,856	4,575	15	72.4	0.2	0.3
1918-19.....	6,398,068	3,028	9	47.3	0.1	0.2
1919-20.....	6,485,280	7,807	8	120.3	0.1	0.1
1920-21.....	6,572,492	10,928	29	166.2	0.4	0.9

MEASLES.

For the fiscal year ending June 30, 1921, there were reported to this department 33,676 cases of measles against 33,535 for 1919-1920; 19,165 for 1918-1919; 29,191 for 1917-1918 and 49,945 for 1916-1917. The deaths for the same period were as follows: 353, 1920-1921; 429, 1919-1920; 276, 1918-1919, and 351, 1917-1918.

During the past five years the greatest number of cases occurred during 1916-1917 when 49,945 cases were reported. The year 1920-1921 ranks second with 33,676 reported cases. Owing to the fact that in many cases of measles no physician is in attendance and hence the case is not reported, these figures do not represent the actual number of cases occurring.

Possibly the largest epidemics of measles during the year were as follows: Bloomington with 765 reported cases; Elgin reporting 840 cases, and Quincy reporting 484 cases.

MEASLES.
(Calendar years).

	1916	1917	1918	1919	1920
January.....	1,556	4,634	1,150	711	4,366
February.....	2,943	6,464	939	1,072	4,610
March.....	6,403	10,740	1,237	2,453	4,982
April.....	6,246	10,334	1,278	5,754	5,343
May.....	5,393	10,140	1,501	5,204	5,542
June.....	3,176	4,505	641	3,142	4,434
July.....	1,403	1,331	273	753	1,573
August.....	355	312	121	153	542
September.....	194	189	56	101	233
October.....	345	122	141	270	510
November.....	969	389	67	536	1,280
December.....	2,353	417	171	757	1,965
Total.....	31,336	49,577	7,575	20,906	35,400

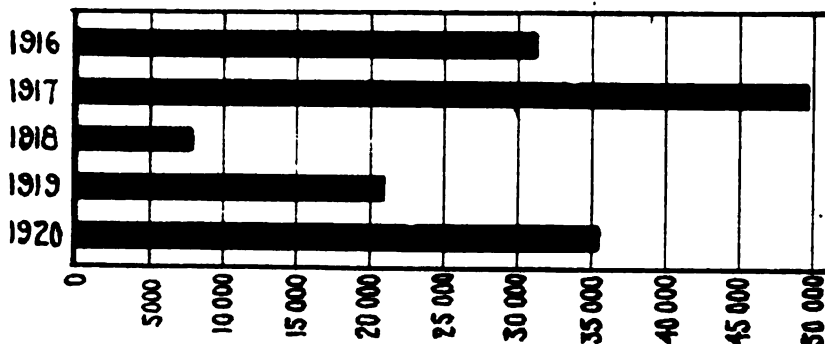


Figure VI—Reported Cases of Measles.

MEASLES.
(Morbidity, mortality and fatality rates.)

Fiscal years.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	U. S. mortality rate.	Fatality rate (percent reported cases).
1917-18.....	6,310,856	29,191	351	462.5	5.5	10.8	3.6
1918-19.....	6,398,068	19,165	276	299.5	4.4	3.9	1.4
1919-20.....	6,485,280	33,535	429	517.1	6.6	8.8	1.3
1920-21.....	6,572,492	38,676	353	512.4	5.5	-----	1.0

SCARLET FEVER.

A total number of 19,765 cases of scarlet fever was reported with 361 deaths for 1920-1921; 16,810 cases with 324 deaths for 1919-1920; 4,140 cases with 162 deaths for 1918-1919; 5,804 cases with 251 deaths for 1917-1918, and 27,534 cases for 1916-1917. Commencing with the opening of the public schools in September, 1920, there was an unusually rapid increase in the number of cases, ranging from 715 cases in September to the highest point of 3,116 cases in January. Many of the cases were quite mild and as a result the physicians were not called and many cases were not reported.

During the year there were a number of large outbreaks of which the largest was in Springfield, during the winter and spring of 1921. There were 1,040 cases reported, the majority of which were of a mild type.

Scarlet fever was epidemic in Galva for a number of months, the most severe outbreak occurring during the months of April, May and June when 86 cases were reported.

SCARLET FEVER.
(Calendar years.)

	1916	1917	1918	1919	1920
January.....	1,878	2,284	758	440	2,449
February.....	1,891	2,625	611	588	2,235
March.....	2,281	3,403	561	662	2,335
April.....	1,564	2,488	505	586	1,708
May.....	1,547	2,230	362	495	1,456
June.....	893	1,329	148	289	862
July.....	416	699	150	99	429
August.....	239	351	101	97	293
September.....	488	528	231	304	715
October.....	933	401	189	656	1,385
November.....	1,264	232	201	893	1,972
December.....	1,682	648	208	1,101	2,637
Total.....	15,076	17,220	4,025	6,210	18,476

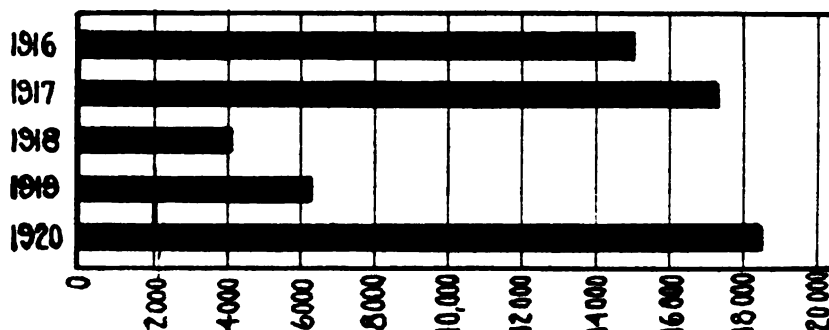


Figure VII—Reported Cases of Scarlet Fever.

SCARLET FEVER.
(Morbidity, mortality and fatality rates.)

Fiscal years.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	U. S. mortality rate.	Fatality rate (per cent reported cases).
1917-18.....	6,310,856	5,804	251	91.4	3.9	3.0	4.3
1918-19.....	6,398,068	4,140	182	64.7	2.5	2.8	3.9
1919-20.....	6,485,280	16,810	324	259.2	4.9	4.6	1.9
1920-21.....	6,572,492	19,765	361	300.7	5.5	-----	1.8

WHOOPING COUGH.

There were reported during the year 1920-1921, 16,165 cases of whooping cough with 549 deaths; for 1919-1920 there were reported 13,275 cases with 444 deaths; for 1918-1919, 7,214 cases and 424 deaths; and for 1917-1918, 14,306 cases with 708 deaths.

We do not get complete reports in either whooping cough or measles. It will be noted from the foregoing statement that whooping cough is of major importance because of the complications which follow this disease. More deaths occur from whooping cough than from typhoid fever, poliomyelitis, and epidemic meningitis. The highest mortality was reached in 1917-1918 when there occurred 708 deaths. Unfortunately, it is considered one of the so-called minor diseases of childhood by the laity.

DIPHTHERIA.

During the year 1920-1921 there were reported to the State Department of Public Health 16,764 cases of diphtheria with 1,243 deaths. For the year 1919-1920 there were reported 12,876 cases and 1,061 deaths; in 1918-1919, 7,789 cases and 978 deaths; for 1917-1918, 11,069 cases and 1,527 deaths; and for the year 1916-1917, 13,716 cases.

During the past four fiscal years the average number of deaths per year was about 1,200, the morbidity averaging about ten times as great as the mortality. During the pre-antitoxin days the mortality ran 40

per cent of the cases, but with the introduction of antitoxin it has been reduced to about 10 per cent. It seems like this is an unusually large number of deaths when one considers that we have at our disposal diphtheria antitoxin which, if given within the first 24 hours of the disease, would cure nearly every case. It is true, however, that the number of deaths for the past few years have remained more or less constant. The greatest mortality and morbidity in diphtheria is between the ages of one and five years. Over 80 per cent of the deaths occur under five years of age. Where the cause of death has been analyzed it has been found that in a great many of the cases the death was due to the non-recognition of cases and the lack of early treatment. In view of the above fact that the mortality has remained constant for a number of years it would seem that the control of diphtheria will have to be met by other means than have been used in the past.

At Mooseheart, in Illinois, more than a thousand children were immunized with toxin-antitoxin and only one case of diphtheria was reported among those immunized during the past two years. It is claimed that the active immunity produced by toxin-antitoxin lasts about five years. It is most important that children under five years be immunized with toxin-antitoxin on account of the high morbidity and mortality of children in this age group. If we can immunize 95 per cent of our children for five years by giving them toxin-antitoxin we can reduce the mortality from 60 to 80 per cent. As soon as diphtheria is clinically diagnosed antitoxin should be given without waiting for a laboratory result of nose and throat cultures.

DIPHTHERIA.
(Calendar years.)

	1916	1917	1918	1919	1920
January.....	973	1,263	1,028	750	878
February.....	810	1,072	649	687	693
March.....	736	1,312	751	688	850
April.....	569	1,124	665	644	787
May.....	640	1,141	565	668	761
June.....	643	930	566	470	662
July.....	471	890	487	485	600
August.....	525	722	362	397	520
September.....	797	1,212	604	751	908
October.....	1,564	814	990	1,589	1,913
November.....	1,627	2,046	703	1,628	2,544
December.....	1,337	1,161	705	1,207	2,261
Total.....	10,682	19,687	8,075	9,964	13,377



Figure VIII—Reported Cases of Diphtheria.

DIPHTHERIA.
(Morbidity, mortality and fatality rates.)

Fiscal years.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	U. S. mortality rate.	Fatality rate (per cent reported cases.)
1917-18	6,310,856	11,060	1,527	175.4	24.1	8.6	13.7
1918-19	6,398,068	7,789	978	121.2	15.2	7.5	12.6
1919-20	6,485,280	12,876	1,061	198.5	16.3	15.3	8.2
1920-21	6,572,492	16,764	1,243	255.1	18.8	-----	7.4

INFLUENZA.

During the fiscal year of 1920-1921, there were reported to the State Department of Public Health 3,056 cases of influenza with 597 deaths. The largest number of cases to be reported in one month was 520 for December. The smallest numbers were 55 for July, 1920, and 63 for June, 1921. The average number of cases per month was approximately 253 cases. The following tables show the marked decreases following the pandemic of 1918-1920.

INFLUENZA.
(Fiscal years.)

	1918-1919	1919-1920	1920-1921
July	-----	272	55
August	-----	384	124
September	541	562	163
October	145,067	723	217
November	40,806	549	283
December	43,204	711	520
January	28,354	80,020	490
February	13,369	80,946	424
March	10,486	5,731	293
April	2,029	741	309
May	166	159	125
June	20	156	63
Total	284,142	170,984	3,056

RABIES.

During the past year there were reported nine cases of rabies with one death, as compared with fourteen cases with three deaths for 1919-1920.

TUBERCULOSIS.

In checking over our morbidity reports of tuberculosis we note that there were reported for the fiscal year 1916-1917, 11,106 cases; for 1917-1918, 19,703 cases with 8,402 deaths; for 1918-1919, 15,909 cases with 7,820 deaths; for 1919-1920, 18,286 cases with 6,741 deaths; and for 1920-1921, 13,265 cases with 5,594 deaths.

EPIDEMIC MENINGITIS.

During the fiscal year ending June 30, 1921, there were reported to this division 193 cases of epidemic meningitis with 63 deaths; during 1919-1920, 272 cases with 95 deaths; for 1918-1919, 171 cases with 92 deaths; and for 1917-1918, 531 cases with 240 deaths.

POLIOMYELITIS.

Within the fiscal year there were reported 303 cases of poliomyelitis with 66 deaths, being a decrease of cases and deaths as compared with the year 1919-1920, when there were 364 cases and 101 deaths. In 1918-1919, 265 cases with 120 deaths were reported, and in 1917-1918, 867 cases with 328 deaths.

POLIOMYELITIS
(Calendar years.)

	1916	1917	1918	1919	1920
January.....		9	10	9	3
February.....		13	4	3	5
March.....		12	17	7	9
April.....		17	21	4	7
May.....	4	6	18	13	6
June.....	22	12	16	12	12
July.....	137	27	43	77	9
August.....	295	128	73	101	35
September.....	222	373	79	70	80
October.....	85	213	18	28	66
November.....	23	39	2	29	42
December.....	10	9	2	17	18
Total.....	798	858	303	370	292

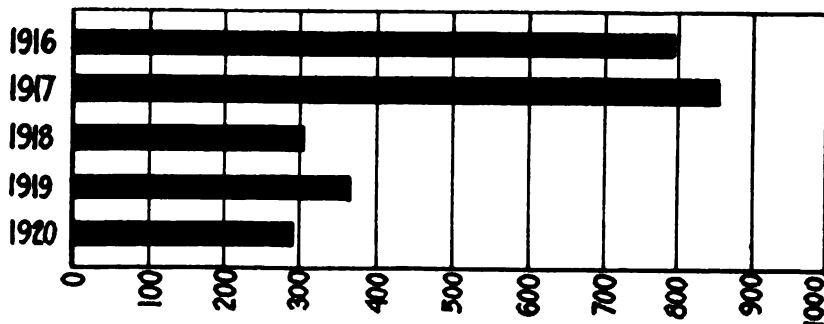


Figure IX—Reported Cases of Poliomyelitis.

POLIOMYELITIS.
(Morbidity, mortality and fatality rates.)

Fiscal years.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rate (per cent reported cases).
1917-18.....	6,310,856	867	328	13.8	5.3	38.6
1918-19.....	6,398,068	265	120	4.1	1.8	44.5
1919-20.....	6,485,280	364	101	5.6	1.5	27.7
1920-21.....	6,572,492	303	66	4.6	1.0	21.7

PNEUMONIA.

During the past year there were reported 8,976 cases of pneumonia with 4,948 deaths. The year previous, 1919-1920, there were 18,276 cases with 8,118 deaths; during 1918-1919, 20,097 cases with 13,626 deaths; and for the year 1917-1918, there were 5,458 cases with 8,277 deaths.

During the past four years the greatest number of cases of pneumonia was, of course, reported during the years when influenza was epidemic. During those years an average of 20,000 cases of pneumonia were reported against a normal year of some 9,000 cases. Of course, 9,000 does not nearly represent the actual number of cases that occur in Illinois. Deaths from pneumonia average over 8,000 each year in this State. It seems that the people do not realize the seriousness of this disease as a menace to health and its infectious nature. This disease ranks with tuberculosis as one of the principal causes of death. In one or two years it outranked tuberculosis as the cause. The number of cases of tuberculosis in comparison with the morbidity and the mortality for both diseases will be found in the tables following:

MORBIDITY TABLE.
(Fiscal years.)

	1917-1918	1918-1919	1919-1920	1920-1921
Tuberculosis.....	19,703	15,909	18,286	13,265
Pneumonia.....	5,458	20,097	18,276	8,976

MORTALITY TABLE.
(Fiscal years.)

	1917-1918	1918-1919	1919-1920	1920-1921
Tuberculosis.....	8,402	7,820	6,741	5,594
Pneumonia.....	8,277	13,626	8,118	4,948

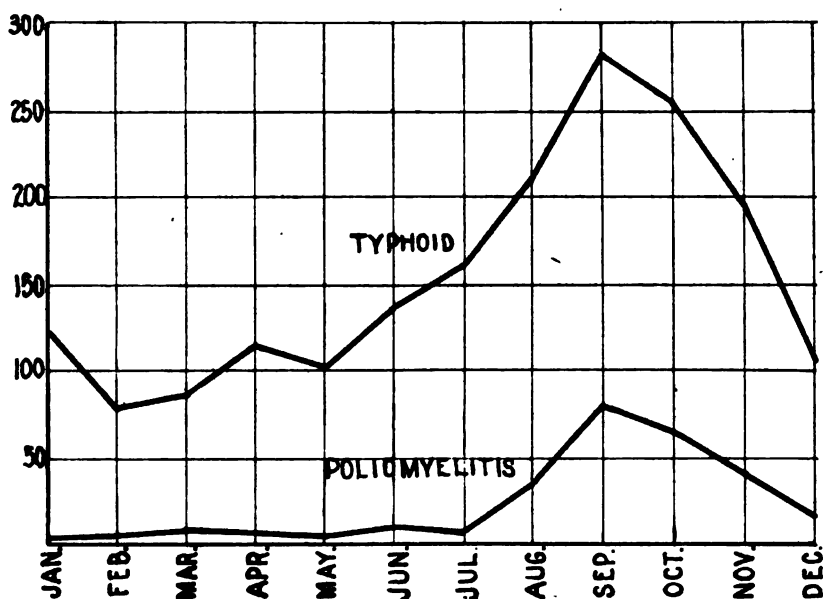


Figure X—Seasonal prevalence of diseases indicated for calendar year 1920.

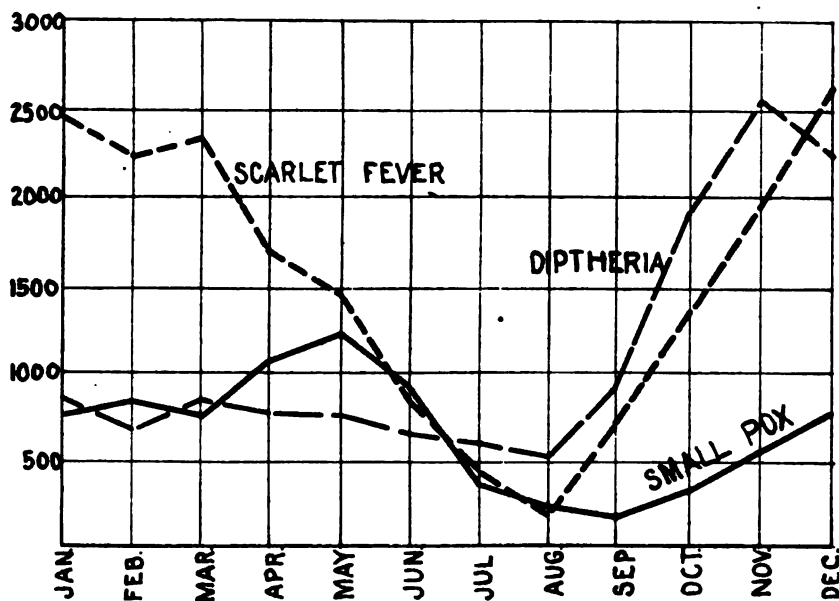


Figure XI—Seasonal prevalence of diseases indicated for calendar year 1920.

ENCEPHALITIS LETHARGICA.

This disease has been reported from all parts of the world. It was reported in Austria in the beginning of 1917; in England and France in the spring of 1918; in Italy during the following winter; in Portugal in February of 1919; in India in November, 1919; in Spain during the early part of 1920; and in the United States it appeared in the latter part of the year of 1918 in the states bordering on the Atlantic Ocean and the following October it occurred on the Pacific coast.

During the year 1920 there was reported first in Chicago a number of cases diagnosed as encephalitis lethargica, or so-called sleeping sickness. Shortly after these cases were recognized and physicians' attention called to the fact that certain clinical symptoms were indicative of encephalitis, the State Department of Health was called upon to confirm the diagnosis of encephalitis lethargica. During the year 1920 there were reported to this department in the first six months 237 cases and during the last six months seven cases. In 1921, 200 cases were reported for the first six months of the year.

When this disease first made its appearance in Illinois the State Department of Public Health promulgated a special order making cases of this disease reportable to local health authorities and subject to isolation, and further providing:

The cases and nursing attendant must be isolated. If isolation is efficient and other inmates of premises do not come in contact with the patient or attendant or with articles coming from the sick room, such other inmates may leave the premises to attend to necessary business affairs. Isolation shall continue until such time as convalescence is established and can be terminated only by local health authorities. Premises should be placarded.

LEPROSY.

During the past year there were reported to the State Department of Public Health two cases of leprosy. The first case was a Greek, a resident of East Moline, who worked in the shops in Silvis.

The second case was reported in a man, 30 years of age, whose regular occupation was that of a dry goods salesman. He came to this country in 1912 and has been living in Chicago ever since, with the exception of the first six months of 1918, during which time he was employed as a shipping clerk in Dallas, Texas. In 1918, he entered the United States Army and served in France. He was discharged "in good health" May 28, 1919, from an engineers' company. Apparently the onset of his disease was about November, 1916. He has done no work since December, 1920. At the present time he is isolated at Cook County Hospital.

PELLAGRA.

During the year there were reported to this division thirteen cases of pellagra. Five of these cases occurred in Cook County; two were reported from the Dixon State School and Colony; two from the Alton State Hospital; two from the Kankakee State Hospital; one from the

Peoria State Hospital at Bartonville; and one from Goreville, Johnson County. No doubt there were other cases in the State that were not reported.

ANTHRAX.

Seven cases of anthrax were reported during this period of one year; one in each of the months of August, September and December, 1920, and two in each of the months of January and February, 1921. This is primarily a disease of animals and more particularly of cattle and sheep but does occasionally occur among those who work among these animals or handle hides or wools.

An investigation of the source of cases of anthrax occurring in August and September showed that the use of infected shaving brushes was responsible for these cases. All of the infected brushes belonged to one lot and were of cheap grade, made of horse hair, in imitation of "Badger" and none bore either the manufacturer's name or trade mark.

The prompt destruction of all shaving brushes sent out from this source of infection to various parts of the country undoubtedly resulted in the prevention of other cases of anthrax. The good achieved as the result of a thorough investigation of the source of infection of these cases illustrates quite well the protection which the public receives as the result of the scientific application of our knowledge regarding the cause and means of transmission of communicable diseases.

MILK SICKNESS.

Several cases of another rather uncommon disease in man in Illinois known as "milk sickness" were investigated by one of the district health officers. It appears from his report that some twenty cases of this disease had occurred in Grundy County since 1916, with one death in 1920 attributed to this disease. Other cases are known to have occurred in this same locality prior to 1916 according to another investigator detailed there by the former State Board of Health.

A number of "endemic foci" were reported in Grundy County. The disease is said to follow dry weather when cattle pasture in wooded places and always occurs in the fall of the year. The symptoms are fairly constant and consist of progressive weakness, various stomach and bowel symptoms, subnormal temperature, slow pulse and coma at times.

In order to prevent the occurrence of this disease it is recommended that the low wooded lands where the cows have access to noxious weeds be cleared of timber. This seems reasonable since the growth of weeds, thought to be responsible for the condition of milk which causes this disease in persons who drink it, is favored by shade and dampness.

TRACHOMA.

As a result of a conference called in March, 1920, by the Trachoma Committee of the Illinois Society for the Prevention of Blindness at which the Board of Welfare Commissioners of the Department of Public

Welfare was represented, it was agreed that an intensive survey of the prevalence of this disease should be made in a small area selected in southern Illinois, and that a treatment clinic should also be established. In addition to the two organizations mentioned, the Eye Department of the University of Illinois, the American Red Cross and the State Department of Public Health cooperated in the planning for and actual conduct of this work during the months of May, June and July. The main clinic was held at Mt. Vernon with plans for branch consultation clinics at Harrisburg and Benton. The following is a brief report of the medical director, Dr. E. V. L. Brown, for the first three months' work of the clinics:

MT. VERNON—MAY 10 TO JULY 26, 1920.

Attendance—first day	17
Total attendance	515
Trachoma patients	33

HARRISBURG—JUNE 29, JULY 7 and 21, 1921.

Attendance—first day	58
Total attendance	114
Trachoma patients—39 per cent.	45

BENTON—JULY 23, 1920.

Attendance	85
Trachoma patients—29 per cent.	12
Seen by doctor	42
Referred to next clinic	43

Mt. Vernon is a treatment clinic; does not therefore refer all cases for attention of local physicians.

Harrisburg and Benton are consultation clinics and refer all cases to attention of local physicians in consultation with clinic physician, and keep in touch with patients until they are under satisfactory care.

ANALYSIS OF DISPOSITION OF CASES IN HARRISBURG AND BENTON CLINICS.

	Harrisburg.	Benton.	Total.
Advised treatment	63	15	78
Advised refraction	22	14	36
Advised further study	2	3	5
Advised no treatment	7	5	12
Advised hospital care	1	1	*1
Referred to doctor (without examination)	7		7
Advised change of work		1	1
Advised operative treatment—			
Cataract	3	1	4
Trachoma	2		2
Pterygium	2		2
Enucleation	*1	2	3
Return for observation		1	*1
	115	43	158

* Referred to doctor also.

OCCUPATIONAL DISEASE.

The Occupational Disease Act is "An Act to promote the public health by protecting certain employees in this State from the dangers of occupational diseases, and providing for the enforcement thereof."

149. Physical Examinations, Reports.

Sec. 4. It is hereby made the duty of any licensed physician who shall make the physical examination of employees under the provisions of section 2 of this act, to make an immediate report thereof to the State Department of Health of the State of Illinois upon blanks to be furnished by said department upon request, and if no such disease or illness is found the physician shall so report, and if any such disease is found, the report shall state the name, address, sex and age of such employee and the name of such employer, and the nature of the disease or illness with which the employee is afflicted, and the probable extent and duration thereof, and the last place of employment: *Provided*, that the failure of any such physician to receive the blanks of the State Department of Health for the making of such report, shall not excuse such physician from making the report as herein provided.

150. State Department of Health, Director's Duty.

The Director of the State Department of Health shall, immediately upon receipt of any report from any physician in accordance with the provisions of section 4 of this act, transmit a copy thereof to the Illinois Department of Factory Inspection.

There are 311 firms reporting monthly the number of men examined and the diseases found. During the fiscal year 84,712 men were examined for occupational diseases and 140 cases of lead poisoning, one case of arsenic poisoning and one case of carbon monoxide poisoning were reported to this division.

THE COST OF COMMUNICABLE DISEASES.

In the past three annual reports tables were published showing the cost of communicable diseases in the different counties in the State, in which some interesting figures present themselves. The highest cost per capita, for 1920-1921, was in Union County with \$52.71 and the lowest was in Monroe County where communicable diseases cost \$5.98 per capita for the year.

In computing the cost of communicable disease, the following definite factors were taken into consideration and in every instance it is believed that the figures employed result in an under-statement rather than an exaggeration of the facts; cost of human life, computed at \$3,000 for the adult and \$500 for the child; cost of burial for the adult, \$100 and \$50 for the child; estimate of the number of cases of illness for each death from disease, prepared upon recognized epidemiological standards; the cost for medicine and nursing for the sick and the value of the loss of time from productive or gainful occupation. In these compilations, each disease was given careful and separate consideration and it is believed that the resultant figures state the case as clearly and accurately as it can be stated.

The total cost of communicable diseases for the year amounted to \$103,933,543, or a cost per capita of \$15.81 for every person in the State of Illinois. In 1919-1920, the total cost was \$150,070,738 and in 1918-1919, \$223,634,515. The largest reduction in cost is found in tuberculosis, pneumonia and influenza. Tuberculosis again ranks first with a grand total of \$72,207,900 for 1920-1921, and \$90,002,500 for 1919-1920. Pneumonia for 1920-1921 was \$18,140,755 and for 1919-1920, \$28,436,953. For the year 1920-1921 the cost of influenza was \$1,913,094 and for the year before \$18,895,551.

DISTRIBUTION OF DIPHTHERIA ANTITOXIN.

During the fiscal year just passed, the following quantities of diphtheria antitoxin were distributed:

22,539	1,000 unit packages, chiefly for preventive use.
2,445	3,000 unit packages, for individual curative use.
16,564	5,000 unit packages, for individual curative use.
16,586	10,000 unit packages, for individual curative use.
1,197	10,000 unit packages, for institutional use.
1,078	20,000 unit packages, for institutional use.

60,409 packages or 412,084,000 units.

Of 19,670 cases of diphtheria in Illinois in which reports on the administration of State antitoxin were received by the department during the past 18 months, 1,136, or 5.67 per cent died. The period in which these cases occurred, however, includes the fall of 1920 when the death rate from diphtheria was unusually small.

Of the 1,136 fatal cases, 358 were reported as of the laryngeal type. This probably is under estimated as in many instances the physicians did not report the type of disease. In 332 cases resulting fatally the day of the membrane on which antitoxin was first administered was not indicated; in 110 cases antitoxin was reported as administered on the first day of the membrane; in 180 cases on the second day; in 184 cases on the third day; in 167 cases on the fourth day; in 83 cases on the fifth day; in 45 cases on the sixth day; in 27 cases on the seventh day; in 4 cases on the eighth day; in 3 cases on the ninth day; and 1 on the tenth day.

Complications in fatal cases were reported as follows: Adenitis in 8 cases; arthritis in 1 case; broncho pneumonia in 24; endocarditis in 14; gastro enteritis in 5; influenza in 10; malnutrition in 4; measles in 8; mumps in 8; myocarditis in 36; nephritis in 51; neuritis in 9; oedema of larynx in 4; oedema of glottis in 6; post diphtheric paralysis in 22 (paralysis of larynx 7, paralysis of palate 2, paralysis of pharynx 6); pneumonia in 15; scarlet fever in 68; uremia in 13; and whooping cough in 9.

The ages of the fatal cases were as follows: Not stated, 10 cases: 1 year old, 59; 2 years, 87; 3 years, 103; 4 years, 127; 5 years, 96; 6 years, 95; 7 years, 102; 8 years, 74; 9 years, 58; 10 years, 44; 11 years, 30; 12 years, 26; 13 years, 24; 14 years, 21; 15 years, 23; 16 years, 17; 17 years, 18; 18 years, 20; 19 years, 16; 20 years, 15; 21 years, 9; 22 years, 7; 23 years, 6; 24 years, 6; 25 years, 11; 27 years, 6; 28 years, 4; 29 years, 5; 30 years, 9; 31 years, 3; 32 years, 1; 33 years, 4; 34 years, 1; 35 years, 3; 37 years, 1; 40 years, 3; 42 years, 1; 45 years, 1.

The ages of the non-fatal cases were as follows: Not stated, 441 cases: 1 year old, 392; 2 years, 825; 3 years, 1,113; 4 years, 1,170; 5 years, 1,259; 6 years, 1,367; 7 years, 1,435; 8 years, 1,082; 9 years, 984; 10 years, 1,111; 11 years, 873; 12 years, 717; 13 years, 475; 14 years, 377; 15 years, 375; 16 years, 434; 17 years, 421; 18 years, 313; 19 years, 300; 20 years, 302; 21 years, 255; 22 years, 225; 23 years, 220;

24 years, 192; 25 years, 259; 26 years, 217; 27 years, 246; 28 years, 133; 29 years, 287; 30 years, 155; 31 years, 97; 32 years, 219; 33 years, 120; 34 years, 132; 35 years, 155; 36 years, 119; 37 years, 89; 38 years, 129; 39 years, 49; 40 years, 108; 41 years, 48; 42 years, 80; 43 years, 44; 44 years, 24; 45 years, 52; 46 years, 30; 47 years, 41; 48 years, 37; 49 years, 51; 50 years, 15; 51 years, 28; 52 years, 13; 53 years, 2; 54 years, 4; 55 years, 3; 56 years, 5; 57 years, 2; 58 years, 3; 59 years, 2; 60 years, 1; 61 years, 1; 62 years, 3; 63 years, 2; 64 years, 1; 65 years, 1; 66 years, 1; 67 years, 1; 68 years, 1; 69 years, 1; 74 years, 1.

Complications in non-fatal cases were reported as follows: Adenitis in 12; albuminuria in 3; anaphylaxis in 1; arthritis in 5; broncho pneumonia in 19; chickenpox in 23; cyanosis in 3; dermatitis in 1; dyspnea in 1; endocarditis in 2; epistaxis in 3; influenza in 5; laryngeal paralysis in 7; laryngeal stenosis in 1; laryngitis in 2; laryngismus in 1; malnutrition in 1; measles in 26; mumps in 6; myocarditis in 156; nephritis in 59; neuritis in 13; otitis media in 27; partial deafness in 1; peritonsillar abscess in 33; pneumonia in 13; post diphtheric paralysis in 47 (nasal paralysis in 1, paralysis of palate in 26); scarlet fever in 937; uremia in 3; urticaria in 5; Vincent's Angina in 7; and whooping cough in 17.

TABLE 3—SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE ENTIRE STATE OF ILLINOIS BY MONTHS FOR THE YEARS JULY 1, 1919 TO JUNE 30, 1920 AND JULY 1, 1920 TO JUNE 30, 1921.

Diseases.	July.		August.		September.		October.		November.		December.		January.	
	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21
Typhoid fever.....	265	162	294	211	306	294	346	257	251	198	183	109	124	96
Malaria.....	417	171	294	279	265	117	170	132	97	87	63	123	59	80
Smallpox.....	183	383	135	212	232	198	260	326	648	553	779	1,294	776	1,900
Measles.....	1,110	1,573	255	542	118	233	342	510	706	1,280	1,727	1,965	4,366	3,932
Scarlet fever.....	211	1,439	188	293	579	715	1,295	1,385	1,597	1,972	1,895	2,637	2,449	3,116
Whooping cough.....	618	1,650	802	1,214	723	929	554	957	1,818	1,059	1,206	1,390	1,143	1,530
Diphtheria.....	541	1,650	528	1,454	992	904	1,898	1,997	2,060	2,700	1,505	2,343	1,139	1,874
Infuenza.....	272	56	384	124	562	163	723	217	2,549	283	711	520	80,020	490
Rabies.....	.....	.....	1	.....	3	.....	3	.....	.....	.....	.....	3	.....	4
Tuberculosis (all forms).....	1,720	1,065	1,447	729	1,627	1,205	1,719	1,012	1,683	938	1,580	1,114	1,433	989
Meningitis epidemic.....	25	7	20	12	11	15	33	16	31	20	21	9	31	20
Polioomyelitis.....	77	9	101	35	70	80	28	66	29	43	17	18	3	4
Pneumonia.....	308	282	185	215	233	266	451	335	601	604	1,275	980	7,012	1,568
Septic sore throat.....	80	74	81	94	119	91	177	153	224	235	210	206	180	178
Syphilis.....	438	743	563	449	775	681	1,137	568	1,390	520	1,349	564	1,206	655
Gonorrhea.....	954	1,365	1,075	1,066	1,083	1,301	2,074	1,550	2,324	1,397	1,569	1,230	1,413	1,087
Chancroid.....	43	77	54	96	37	63	121	70	133	83	78	65	94	104

TABLE 3—Concluded.

Diseases.	February.		March.		April.		May.		June.		Totals.	
	1919-20		1919-20		1919-20		1919-20		1919-20		1919-20	
	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21
Typhoid fever.....	80	74	88	83	115	89	103	72	138	182	2,293	1,737
Malaria.....	112	44	84	82	114	44	142	68	194	138	2,011	1,365
Smallpox.....	842	1,659	748	1,780	1,063	1,204	1,232	1,027	900	412	7,907	10,928
Measles.....	4,610	4,527	4,982	5,011	5,343	5,894	5,542	4,954	4,434	2,435	33,535	33,876
Scarlet fever.....	2,335	2,525	2,335	2,241	1,708	2,113	1,456	1,620	1,464	1,821	16,810	19,765
Whooping cough.....	1,222	1,327	2,061	1,482	1,204	1,440	1,456	1,466	1,464	1,821	13,275	16,165
Diphtheria.....	1,938	1,364	1,058	1,350	1,778	1,215	1,793	1,085	1,656	944	12,876	16,764
Influenza.....	80,946	424	5,731	1,263	741	1,309	189	125	156	63	170,954	3,056
Rabies.....	1	1	3	2	741	1,309	189	125	156	63	170,954	3,056
Tuberculosis (all forms).....	1,164	1,103	1,820	1,366	1,320	1,253	1,265	1,208	1,468	1,263	18,285	13,265
Meningitis epidemic.....	1,33	25	28	25	12	11	14	18	13	15	18,272	183
Poliomyelitis.....	5	7	9	7	7	3	6	5	12	27	394	303
Pneumonia.....	4,049	1,222	1,655	1,345	1,066	992	936	738	485	429	18,276	8,976
Septic sore throat.....	278	148	206	164	114	107	87	77	63	31	1,789	1,558
Syphilis.....	724	551	1,503	608	1,297	662	1,622	648	1,218	608	13,222	7,277
Gonorrhea.....	966	1,021	1,350	1,100	1,435	912	1,728	938	1,669	861	17,670	13,596
Chancroid.....	70	51	64	66	71	55	71	34	148	25	17,984	13,789

TABLE 4—SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE CITY OF CHICAGO, ILLINOIS BY MONTHS FOR THE YEARS JULY 1, 1919 TO JUNE 30, 1920 AND JULY 1, 1920 TO JUNE 30, 1921.

Diseases.	July		August.		September.		October.		November.		December.		January.	
	1919-20		1920-21		1919-20		1920-21		1919-20		1920-21		1919-20	
	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21
Typhoid fever.....	31	14	36	11	33	47	78	41	35	29	21	22	14	18
Malaria.....	2	5	19	2	5	7	5	2	5	15	8	2	2	71
Smallpox.....	753	447	153	69	101	73	270	148	536	363	757	508	977	738
Measles.....	99	179	97	304	304	240	656	563	863	622	1,101	764	1,379	840
Scarlet fever.....	607	392	484	266	506	260	292	199	380	170	696	262	475	310
Whooping cough.....	350	386	232	230	514	453	948	937	1,112	1,313	779	1,175	601	1,026
Diphtheria.....	16	4	26	7	164	44	218	74	178	89	212	90	22,623	94
Indianna.....					1		1							
Rabies.....														
Tuberculosis (all forms).....	1,431	865	1,065	490	1,201	714	1,274	825	1,199	683	1,084	915	1,101	832
Meningitis epidemic.....	10	4	7	1	7	5	15	10	13	7	1	4	12	9
Polioomyelitis.....	27	1	42	19	18	21	3	18	2	9	2	2		
Pneumonia.....	277	231	167	172	191	237	378	272	483	466	978	696	4,687	1,161
Septic sore throat.....	1	2	2	1	3	4	14	4	32	13	39	16	32	12
Syphilis.....	353	312	658	240	719	422	743	266	548	286	524	302	497	403
Gonorrhea.....	754	770	1,151	453	940	780	964	602	1,042	661	802	69	808	588
Chancroid.....	36	32	43	23	42	37	52	31	50	38	31	36	108	38

TABLE 3—SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE ENTIRE STATE OF ILLINOIS BY MONTHS FOR THE YEARS JULY 1, 1919 TO JUNE 30, 1920 AND JULY 1, 1920 TO JUNE 30, 1921.

Disease.	July.		August.		September.		October.		November.		December.		January.	
	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21
Typhoid fever.....	265	162	294	211	306	284	346	257	251	198	183	109	124	96
Malaria.....	417	171	294	279	265	117	170	132	97	87	63	123	59	80
Smallpox.....	183	383	135	212	232	198	260	326	648	553	779	1,294	776	1,900
Measles.....	1,110	1,573	255	542	118	233	342	510	706	1,280	1,727	1,985	4,366	3,932
Scarlet fever.....	211	439	188	293	579	715	1,395	1,395	1,597	1,972	1,895	2,637	2,449	3,116
Whooping cough.....	618	1,650	802	1,214	723	929	554	957	818	1,059	1,206	1,390	1,143	1,530
Diphtheria.....	541	624	528	1,214	992	904	1,898	1,997	2,060	2,700	1,506	2,343	1,139	1,874
Influenza.....	272	55	384	124	543	163	723	217	549	283	711	520	80,020	490
Rabies.....	.....	.....	1	.....	3	.....	3	.....	.....	.....	.....	3	.....	4
Tuberculosis (all forms).....	1,720	1,065	1,447	729	1,637	1,205	1,719	1,012	1,693	938	1,580	1,114	1,433	989
Meningitis epidemic.....	25	11	20	12	11	15	33	16	31	20	21	9	31	20
Polioomyelitis.....	77	9	101	35	70	80	28	66	29	42	17	18	3	4
Pneumonia.....	308	282	195	215	233	266	451	335	601	604	1,275	980	7,012	1,568
Septic sore throat.....	80	74	81	94	119	91	177	183	224	235	210	206	180	178
Syphilis.....	438	743	563	449	775	681	1,137	568	1,390	520	1,349	584	1,206	655
Gonorrhea.....	954	1,365	1,075	1,066	1,083	1,301	2,074	1,550	2,324	1,397	1,569	1,230	1,413	1,067
Chancroid.....	43	77	54	96	37	63	121	70	133	83	78	65	94	104

TABLE 3—Concluded.

Disease.	February.		March.		April.		May.		June.		Totals.	
	1919-20		1920-21		1919-20		1920-21		1919-20		1920-21	
	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21
Typhoid fever.....	80	74	83	83	115	89	103	72	138	152	2,293	1,787
Salmonella.....	112	44	84	82	114	44	142	68	194	138	2,011	1,365
Shigellosis.....	842	1,659	746	1,760	1,003	1,204	1,232	1,027	799	412	7,897	10,928
Scabies.....	4,910	4,357	4,932	5,911	5,743	5,894	5,542	4,854	4,434	2,435	33,535	33,576
Scarlet fever.....	2,325	2,325	2,335	2,241	1,708	2,115	1,456	1,629	1,822	710	16,510	18,745
Whooping cough.....	1,222	1,377	1,063	1,352	1,394	1,410	1,456	1,080	1,821	1,821	13,575	16,745
Diphtheria.....	833	434	708	1,350	773	1,315	793	1,080	456	944	12,576	16,745
Epidemic.....	80,940	424	5,773	1,292	741	1,309	189	123	153	63	170,544	3,050
Rabies.....	1	1	3	3	1	1	1	1	1	1	1	1
Tuberculosis (all forms).....	1,164	1,103	1,890	1,344	1,350	1,353	1,295	1,208	1,468	1,263	18,265	13,245
Measles.....	33	25	28	25	12	11	14	18	13	15	183	193
Polio-myelitis.....	8	7	9	7	7	3	6	5	12	27	344	303
Polio-myelitis.....	4,046	1,222	1,655	1,345	1,066	992	936	738	495	459	18,276	8,976
Syphilis.....	278	148	208	164	114	107	57	77	63	31	1,789	1,588
Syphilis, acute throat.....	724	531	1,503	608	1,267	663	1,622	648	1,218	608	13,222	7,277
Gonorrhea.....	966	1,021	1,350	1,100	1,435	912	1,728	938	1,669	961	17,670	13,595
Chancroid.....	70	51	64	66	71	55	71	34	148	25	17,984	789

Cumberland.....	4	1	6	4	3	101	52	1	11	2	30	4	10	1	3	.....
DeKalb.....	5	3	2	31	96	100	100	1	129	6	14	4	9	3	.....	.....
Dewitt.....	4	3	.....	64	96	22	22	.....	76	.....	13	1	21	2	.....	.....
Douglas.....	57	.....	.....	17	330	335	95	.....	49	4	76	0	8	.....	.....	.....
DuPage.....	11	.....	4	14	18	.....	80	.....	214	7	13	3	122	1	.....	.....
Edgar.....	12	1	.....	34	28	.....	106	.....	137	2	12	2	2	.....	.....	.....
Edwards.....	13	.....	.....	24	20	.....	30	.....	23	2	14	2	0	.....	.....	.....
Effingham.....	12	2	.....	34	50	.....	10	.....	23	2	12	2	2	.....	.....	.....
Effingham.....	6	.....	9	107	40	.....	10	.....	0	.....	10	4	7	.....	.....	.....
Fayette.....	7	.....	.....	133	40	.....	104	.....	3	.....	13	.....	.....	.....	.....	.....
Ford.....	7	2	1	133	133	133	104	.....	3	.....	13	.....	.....	.....	.....	.....
Franklin.....	59	12	118	263	177	177	4	.....	37	.....	4	.....	.....	.....	.....	.....
Fulton.....	4	1	15	184	107	107	294	.....	298	5	94	8	103	22	.....	.....
Gaston.....	13	3	17	75	106	106	2	.....	10	1	12	5	5	10	.....	.....
Gaston.....	13	3	17	75	106	106	2	.....	10	1	12	5	5	10	.....	.....
Greene.....	4	3	7	87	87	87	35	.....	59	.....	3	.....	.....	.....	.....	.....
Grundy.....	21	5	3	80	80	80	24	.....	158	.....	6	.....	.....	.....	.....	.....
Hamilton.....	32	2	9	188	188	188	61	.....	308	2	63	5	25	3	.....	.....
Hancock.....	32	2	9	188	188	188	61	.....	308	2	63	5	25	3	.....	.....
Hardin.....	1	4	13	28	32	32	5	.....	209	2	12	2	17	9	.....	.....
Henderson.....	1	4	13	28	32	32	5	.....	209	2	12	2	17	9	.....	.....
Henry.....	34	5	.....	68	12	12	2	.....	46	.....	4	.....	.....	.....	.....	.....
Keanee.....	13	7	.....	25	1	1	.....	.....	419	6	213	16	45	8	.....	.....
Inoquois.....	19	2	.....	47	64	64	2	.....	153	1	119	14	17	3	.....	.....
Jackson.....	21	9	20	402	11	11	1	.....	188	3	57	4	44	5	.....	.....
Jackson.....	21	9	20	402	11	11	1	.....	188	3	57	4	44	5	.....	.....
*Murphyboro.....	5	2	.....	107	.....	.....	48	.....	20	6	37	12	44	5	.....	.....
Jasper.....	5	2	.....	107	.....	.....	48	.....	20	6	37	12	44	5	.....	.....
Jefferson.....	16	12	1	120	174	174	9	.....	57	2	11	1	1	.....	.....	.....
Jefferson.....	16	12	1	120	174	174	9	.....	57	2	11	1	1	.....	.....	.....
JoDavies.....	2	3	.....	52	146	146	2	.....	40	9	17	5	17	3	.....	.....
Johnson.....	3	6	30	31	12	12	80	.....	18	3	7	.....	33	2	.....	.....
Kane.....	18	8	.....	32	18	18	9	.....	39	1	21	4	33	16	.....	.....
Kane.....	18	8	.....	32	18	18	9	.....	39	1	21	4	33	16	.....	.....
Aurora.....	8	5	.....	12	1,953	1,953	11	.....	439	6	147	8	3	.....	.....	.....
Elgin.....	4	2	8	15	840	840	2	.....	154	4	56	5	1	6	.....	.....
Kankakee.....	13	2	.....	17	202	202	1	.....	178	1	73	3	6	.....	.....	.....
Kankakee.....	13	2	.....	17	202	202	1	.....	178	1	73	3	6	.....	.....	.....
Kendall.....	10	2	8	16	84	84	4	.....	190	5	90	8	112	4	.....	.....
Kendall.....	10	2	8	16	84	84	4	.....	190	5	90	8	112	4	.....	.....
Knox.....	27	4	.....	130	87	87	17	.....	45	4	10	.....	.....	.....	.....	.....
Knox.....	27	4	.....	130	87	87	17	.....	45	4	10	.....	.....	.....	.....	.....
Galesburg.....	18	5	.....	41	900	900	2	.....	171	3	72	2	5	1	.....	.....
Galesburg.....	18	5	.....	41	900	900	2	.....	171	3	72	2	5	1	.....	.....
LaSalle.....	26	4	1	187	630	630	4	.....	178	3	50	1	184	3	.....	.....
LaSalle.....	26	4	1	187	630	630	4	.....	178	3	50	1	184	3	.....	.....
LaSalle.....	26	4	1	187	630	630	4	.....	178	3	50	1	184	3	.....	.....
Ottawa.....	9	7	.....	108	5	5	35	.....	29	2	51	7	24	5	.....	.....
Ottawa.....	9	7	.....	108	5	5	35	.....	29	2	51	7	24	5	.....	.....
Streator.....	67	11	.....	49	448	448	13	.....	56	1	130	0	1	11	.....	.....
Streator.....	67	11	.....	49	448	448	13	.....	56	1	130	0	1	11	.....	.....
Waukegan.....	24	2	16	97	15	15	2	.....	176	8	62	3	26	1	.....	.....
Lawrence.....	24	4	16	97	15	15	2	.....	39	5	43	1	3	2	.....	.....
Lawrence.....	24	4	16	97	15	15	2	.....	39	5	43	1	3	2	.....	.....
Lee.....	6	.....	.....	27	74	74	3	.....	89	1	1	.....	.....	.....	.....	.....
Livingston.....	6	.....	2	10	155	155	1	.....	286	4	47	3	8	3	.....	.....
Livingston.....	6	.....	2	10	155	155	1	.....	286	4	47	3	8	3	.....	.....
Logan.....	1	1	.....	8	71	71	39	.....	20	1	12	1	32	7	.....	.....
Logan.....	1	1	.....	8	71	71	39	.....	20	1	12	1	32	7	.....	.....
Lincoln.....	1	1	.....	8	71	71	39	.....	20	1	12	1	32	7	.....	.....
Lincoln.....	1	1	.....	8	71	71	39	.....	20	1	12	1	32	7	.....	.....

TABLE 5—Continued.

Counties.	Typhoid fever.		Malaria.		Smallpox.		Measles.		Scarlet fever.		Whooping cough.		Diphtheria.		Influenza.		Rabies.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
McDonough.....	20	1			22		144		43	1	59	1	10	1	39			
McHenry.....	4				39		205		134		181	2	59	5	152			
McLean.....	18	5	3		410	2	1,700	6	481	6	421	10	137	9	30	5	4	5
Bloomington.....	9	4	78		158		765	6	165	1	88	6	10	2	2	8		
Macon.....	25	6			64		78		259	2	285	6	232	17	3	8		
Deatur.....	23				10	1	50		185		174	6	206	16		6		
Macoupin.....	15	4			237		967	9	173	2	160	10	158	9	32	12		
Madison.....	13	8	4		234	5	393	3	117	15	199	15	267	25	10	15		
Alton.....	9	3			15		141		46	2	45	2	189	13	2	2		
Genese City.....		3			24	2	70	1	7	1	7	2	16	1				
Marion.....	38	5	20		87		53	2	28		93	7	211	4	46	8		
Centralia.....	7				28		4		16		78	1	12	3		1		
Marshall.....	22	2	8		8		25		128	3	10		47	12	127			
Mason.....	1				3		6		158		6		12	1				
Masac.....	14	3	12		174	1	8		5		13	5	72	6	12			
Menard.....	3		5		12		25	1	97	4	47		6	1	65			
Mercer.....	8		12		7		424	2	15		109		10		40			
Monroe.....	17	3					11		2		8		27					
Montgomery.....	21	4	9		155		566	5	141	1	99	1	117	4		7		
Morgan.....	17	1	15		39		592	4	268	2	133	2	43	1	20			
Jacksonville.....	9				72		386	2	108		77	1	48					
Moultrie.....	5				27		57	2	47		74	2	10					
Ogle.....	6				150		142		218	4	95	3	10		8			
Peoria.....	14	7			69	1	168	1	1,037	14	73	11	219	1	29	5		
Perry.....	9	5			46		60		672	6	7	4	168	24	20	14		
Perry.....	22	6	8		50		15	1	33		77	5	79	2	22	5		
Platt.....	1				23		18		42		6		207	3	2	2		
Pike.....	8	1	66		12		395	1	31	1	6		13	4	1	1		
Pope.....	2	3	8		14		10		3				4	4	4	1		
Pulaski.....	2	4	70	5	44		20	1	3				20	6	24	1		
Putnam.....											21		77	2				
Randolph.....	16	7	23	1	223		28		31	1	8	1	47	5	1			
Richland.....	4				301		128		15		64	8	152	4				
Rock Island.....	21	5	4		222	1	361	1	155		292		45	5	13			
Moine.....	10	2			72		195		45		78	5	82	2	2			
Rock Island.....	11	3			108	1	42		72	1	106	3	60	2	3			

St. Clair	45	10	20	5	775	1	117	3	308	4	244	25	257	21	23	12
Adairville	16	6	4	1	53	1	83	2	171	8	76	4	40	7	10	2
East St. Louis	19	7	59	3	603	1	479	24	171	10	10	2	135	19	12	6
Saline	47	7	4	1	120	1	267	8	1,338	14	451	4	112	21	12	8
Seaton	27	7	1	1	188	1	267	2	1,048	11	62	1	63	24	16	8
Springfield	27	7	1	1	98	1	84	10	48	1	1	1	41	2	9	1
Scottsbluff	2	1	1	1	10	1	84	10	48	1	1	1	41	2	9	1
Scottsbluff	2	1	1	1	10	1	84	10	48	1	1	1	41	2	9	1
Shelby	13	3	4	1	34	1	75	1	58	1	273	7	32	2	2	1
Stark	13	3	4	1	34	1	75	1	58	1	273	7	32	2	2	1
Stephenson	3	3	1	1	236	1	243	98	99	1	100	2	59	5	18	3
Freepor	2	1	1	1	129	1	180	1	55	1	58	1	45	4	7	1
Tazewell	3	3	1	1	59	1	31	1	307	3	82	4	43	3	104	5
Union	3	3	1	1	59	1	31	1	307	3	82	4	43	3	104	5
Vernon	14	6	186	4	70	1	6	2	27	1	47	1	100	9	3	2
Donahue	26	13	4	1	138	1	41	1	202	2	314	32	55	5	21	13
Warren	71	8	4	1	7	1	7	1	34	1	57	12	77	3	9	6
Washington	1	1	1	1	21	1	146	2	53	1	25	1	10	1	1	1
Wayne	27	4	5	2	25	1	13	1	68	1	33	2	57	5	5	3
White	66	9	1	1	287	1	17	1	23	1	15	1	107	11	1	5
Whiteside	6	1	40	1	145	1	59	1	8	1	16	1	76	15	2	6
Will	39	9	1	1	124	1	158	4	116	1	245	6	12	2	13	6
Joliet	27	7	64	9	50	1	787	19	183	3	442	16	192	17	53	22
Williamson	47	20	64	9	619	3	373	10	72	2	166	4	98	9	9	9
Herrin	47	20	64	9	619	3	41	1	49	1	122	4	126	14	6	14
Wineboro	23	4	1	1	629	1	631	4	378	6	299	6	98	5	39	6
Rockford	14	4	1	1	591	1	285	5	350	5	189	4	89	4	4	5
Woodford	6	1	1	1	13	1	329	5	85	4	30	2	18	1	25	1
State Institutions	6	1	3	1	2	1	111	1	23	1	12	1	72	1	33	1

TABLE 5—Continued.

County.	Tuberculosis all forms.		Epidemic Meningitis.		Poliomylclitis.		Pneumonia all forms.		Septic Sore Throat.		Syphilis.		Gonorrhea.		Chancroid.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
The State	13,265	5,594	193	63	303	66	8,976	4,948	1,558	190	7,277	419	13,828	41	789	
Adams.	76	53			2		12	31	4	4	19	3	40	1	1	
Adams.	63	34					6	19	4	4	18	3	35	1	1	
Quincy.	9	40			1		3	14	59		130	3	20	3	1	
Alexander.	6	37						11			180	2	78			
Carro.	11	10			2	1	4	13	32		2	1	15			
Bond.	2	8					11	9	1	1				1		
Boone.	2	4					4	9								
Bureau.	78	23		1			55	31	31		7		6			
Bureau.	1	5					22	6	1	1						
Calhoun.	4	4	1				22	17	2		3	1	5			
Carroll.	3	6			4	2	28	39	8	3	52	6	131		5	
Cass.	54	24	1		2		28	39	8	3	52	6	131		5	
Champaign.	42	8			1	1	3	5	2	2	30	4	88		2	
Champaign.	11	21			4	1	15	35	11	2	8	2	54		1	
Clark.	6	16					1	17	4	1	7	1	6			
Clark.	32	18			3	2	9	10	21		7	1	17		1	
Clay.	9	17			2		11	11	8		3	1	13		3	
Clinton.	41	38	2		1		24	28	21	7	38	4	114		1	
Cook.	33	13	1				8	15	4	4	21	4	88		1	
Cook.	10,287	2,940	97	30	159	11	7,129	2,645	173	34	4,263	218	7,385	12	368	
Cook.					5		10	13	1	1	1		2			
DeWitt.	12	2														
Blue Island.	10,047	2,547	83	88	137	8	6,837	2,254	103	20	4,204	198	7,283	9	363	
Chicago.	6	18					15	24	5	5	49	1	49		3	
Chicago Heights.	50	23	1		5		28	26	2	1	1	1	6			
Cicero.	21	23	1		2	2	17	20	2					1		
Easton.	6						33		3		2					
Forest Park.	25						19									
Maywood.	68	16	2		2		95	30		2	2	2	1	1		
Oak Park.	10	11	3	2	1			23	6		6	6	6			
Crawford.	2	12		1			4	14					10			
Cumberland.	2	19			1		2	17	4	1	1	1	8			
DeKalb.	11	9	2	1	2		6	17	4			1	16	1	4	
DeWitt.	25	11	1		3		20	7		1	3			2		

DuPage	28	19	1	2	1	1	19	22	5	3	7	16
Edgar	20	20	1	1	1	1	20	9	9	8	8	1
Edward	18	18	1	1	1	1	18	9	9	8	8	4
Elgin	20	18	1	1	1	1	20	9	9	8	8	4
Effingham	2	18	1	1	1	1	3	13	40	1	4	6
Fayette	19	24	1	1	1	1	3	18	4	3	3	5
Ford	4	7	1	1	1	1	9	4	2	1	1	7
Franklin	61	40	1	1	1	1	56	48	57	40	7	73
Fulton	45	28	1	1	1	1	33	33	132	4	20	55
Gallatin	7	7	1	1	1	1	9	4	4	3	5	9
Greene	12	10	1	1	1	1	11	11	1	11	23	3
Grundy	38	14	1	1	1	1	11	6	1	1	1	1
Hamilton	3	22	1	1	1	1	14	19	8	2	8	1
Hancock	9	14	1	1	1	1	9	11	8	1	8	19
Hardin	2	11	1	1	1	1	4	4	32	1	1	1
Henderson	4	2	1	1	1	1	7	7	4	4	4	4
Henry	27	32	1	2	1	1	33	33	11	5	16	44
Kewanee	17	17	1	1	1	1	24	17	11	3	8	18
Knox	6	14	1	1	1	1	17	17	12	3	3	1
LaSalle	38	33	6	6	1	1	16	24	19	2	34	2
Madison	2	1	1	1	1	1	2	2	2	1	1	1
Marquette	47	7	1	1	1	1	23	23	3	2	1	4
McHenry	2	45	1	1	1	1	2	2	2	1	1	1
Menard	5	8	1	1	1	1	23	23	2	1	1	1
Monroe	5	12	1	1	1	1	4	19	2	5	3	3
Montgomery	17	9	1	1	1	1	5	38	1	4	4	2
Morgan	53	97	2	6	1	1	86	79	1	4	117	3
Muskegon	22	22	1	1	1	1	49	34	1	2	37	37
Naperville	24	45	1	1	1	1	16	31	1	2	27	4
Nichols	70	70	1	1	1	1	30	32	26	3	28	63
Niagara	6	15	1	1	1	1	2	14	2	3	3	1
North	7	3	1	1	1	1	6	3	3	1	1	1
Oak	17	28	2	6	1	1	29	29	3	5	5	6
Ogle	14	17	1	1	1	1	38	18	3	2	35	81
Oregon	69	72	3	8	2	2	85	79	5	5	48	1
Peoria	28	7	1	1	1	1	36	15	1	2	45	2
Peru	3	10	1	1	1	1	4	11	1	2	23	1
Rock	4	6	1	1	1	1	8	11	1	1	14	14
Rockford	4	6	1	1	1	1	8	11	1	1	14	14
Streator	13	37	4	3	1	1	34	34	5	6	64	64
Union	6	9	1	1	1	1	10	10	1	2	15	4
Waukegan	15	15	1	1	1	1	18	14	11	1	4	75
Winnebago	17	17	1	1	1	1	10	13	2	1	1	16
Wood	11	12	1	1	1	1	25	22	1	1	4	4
Yankin	8	36	1	1	1	1	30	30	1	1	23	38
Zanesville	3	37	1	1	1	1	16	16	1	1	2	2
Adams	19	19	1	1	1	1	21	21	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany	8	36	1	1	1	1	16	16	1	1	76	9
Albany</												

TABLE 5—Concluded.

County.	Tuberculosis all forms.		Epidemic Meningitis.		Poliomylitis.		Pneumonia all forms.		Septic Sore Throat.		Syphilis.		Gonorrhea.		Chancroid.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Mason.....	55	46	1	1	1	1	45	1	1	214	10	314	1	3	1	1
Deatur.....	49	37	1	1	1	1	37	1	1	214	10	314	1	3	1	1
Macopin.....	16	16	6	1	10	3	15	13	13	214	10	314	1	3	1	1
Malison.....	65	84	1	1	10	3	48	2	2	167	14	485	1	59	1	1
Matton.....	37	16	1	1	1	1	17	1	1	129	9	298	1	49	1	1
Grande City.....	15	15	1	1	1	1	17	1	1	11	1	40	1	1	1	1
Matron.....	28	28	1	1	1	1	23	11	11	6	1	15	1	1	1	1
Capitola.....	27	5	1	1	1	1	17	1	1	2	1	1	1	1	1	1
Marshall.....	33	9	1	1	1	1	9	1	1	14	2	36	1	1	1	1
Mason.....	33	14	3	1	1	1	3	1	1	14	2	36	1	1	1	1
Mason.....	34	18	1	1	1	1	44	5	5	17	1	17	1	1	1	1
Mason.....	10	10	1	1	1	1	10	1	1	2	1	1	1	1	1	1
Manard.....	5	5	1	1	1	1	4	1	1	2	1	1	1	1	1	1
Monroe.....	10	5	1	1	1	1	11	1	1	2	1	1	1	1	1	1
Monroe.....	10	3	1	1	1	1	4	1	1	2	1	1	1	1	1	1
Montgomery.....	68	26	1	1	1	1	10	1	1	55	4	47	1	41	1	1
Morgan.....	98	42	1	1	1	1	30	29	3	95	10	42	1	2	1	1
Morgan.....	89	35	1	1	1	1	56	54	1	77	9	32	1	1	1	1
Jacksonville.....	1	1	1	1	1	1	2	1	1	8	1	19	1	1	1	1
Moultrie.....	25	7	2	1	1	1	10	1	1	1	1	4	1	1	1	1
Ogle.....	113	7	1	1	2	3	47	2	2	224	16	370	2	35	1	1
Peoria.....	114	113	1	1	2	3	98	2	6	224	16	370	2	35	1	1
Peoria.....	80	48	1	1	2	3	98	2	6	224	16	370	2	35	1	1
Perry.....	4	12	2	1	1	3	6	62	1	224	16	370	2	35	1	1
Perry.....	15	11	1	1	1	3	6	62	1	224	16	370	2	35	1	1
Pike.....	11	9	1	1	1	1	15	1	1	224	16	370	2	35	1	1
Pope.....	4	9	1	1	1	1	15	1	1	224	16	370	2	35	1	1
Pope.....	4	9	1	1	1	1	15	1	1	224	16	370	2	35	1	1
Pulaski.....	4	22	1	1	1	1	13	1	1	224	16	370	2	35	1	1
Pulaski.....	4	22	1	1	1	1	13	1	1	224	16	370	2	35	1	1
Putnam.....	9	4	3	1	1	2	8	1	1	224	16	370	2	35	1	1
Putnam.....	9	4	3	1	1	2	8	1	1	224	16	370	2	35	1	1
Randolph.....	133	23	1	1	1	2	13	1	1	224	16	370	2	35	1	1
Randolph.....	11	15	2	1	1	2	13	1	1	224	16	370	2	35	1	1
Richland.....	11	15	2	1	1	2	13	1	1	224	16	370	2	35	1	1
Rock Island.....	186	78	4	1	3	1	60	1	1	287	7	957	1	27	1	1
Rock Island.....	69	26	5	1	1	1	38	1	1	287	7	957	1	27	1	1
McIntire.....	61	30	1	1	1	1	74	1	1	287	7	957	1	27	1	1
Rock Island.....	61	30	1	1	1	1	74	1	1	287	7	957	1	27	1	1
St. Clair.....	89	109	3	1	2	3	43	10	5	302	15	470	2	112	1	1
St. Clair.....	89	109	3	1	2	3	43	10	5	302	15	470	2	112	1	1
Bellerive.....	52	52	5	1	8	3	31	6	1	289	10	396	2	107	1	1
Bellerive.....	52	52	5	1	8	3	31	6	1	289	10	396	2	107	1	1
East St. Louis.....	75	64	5	1	8	3	31	6	1	289	10	396	2	107	1	1
Saline.....	33	41	1	1	1	1	22	1	1	29	1	184	1	19	1	1

Saganon.....	139	1	8	4	80	88	77	257	10	280	4	17
Springfield.....	34	58	4	3	44	60	1	245	10	561	4	16
Schuyler.....	5	13	---	---	2	14	---	---	---	---	1	---
Scott.....	1	7	---	---	---	5	---	---	---	---	---	---
Shelby.....	20	19	2	---	3	19	15	2	---	9	---	2
Stark.....	1	3	---	---	---	4	---	3	---	---	---	---
Stephenson.....	27	20	2	---	13	24	5	29	2	82	---	1
Frederick.....	1	16	---	5	9	19	5	89	2	80	---	1
Tatewell.....	20	17	---	---	2	16	4	36	---	59	---	11
Pekin.....	15	6	---	---	---	5	---	50	---	47	---	8
Union.....	18	59	2	1	3	19	32	1	7	11	---	1
Vermilion.....	110	75	1	---	41	65	11	133	2	210	1	14
Danville.....	70	31	1	---	16	37	9	125	2	184	1	7
Wabash.....	10	9	---	---	3	4	18	---	---	---	---	---
Warren.....	1	12	2	---	10	13	8	27	---	27	---	---
Washington.....	9	9	---	---	1	12	1	---	1	2	---	---
Wayne.....	9	22	1	1	6	19	1	---	---	5	---	---
White.....	14	18	---	---	15	19	16	4	---	5	---	---
Whiteside.....	36	14	---	---	33	28	72	2	9	3	---	1
Will.....	14	92	1	1	84	75	56	56	1	279	2	16
Joliet.....	7	30	1	---	41	31	---	64	1	272	---	15
Williamson.....	18	52	1	2	14	35	12	12	1	19	1	1
Herrin.....	1	---	---	---	1	---	---	3	---	4	---	---
Winnebago.....	54	61	3	1	40	66	10	101	12	406	1	22
Rockford.....	46	51	5	1	36	58	3	101	10	597	---	22
Woodford.....	3	6	---	---	4	7	1	4	---	2	---	---
†State Institutions.....	240	---	2	---	85	---	62	120	---	140	---	5

* Not designated by the U. S. Bureau of the Census until 1921 to be shown separately; hence, mortality figures for the last six months of 1920 are not available.

† All deaths which occurred in State Institutions are included in the total deaths for the County in which the Institution is located.

TABLE 6—COST OF COMMUNICABLE DISEASES

County.	Estimated population Jan. 1, 1921.	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria.	Influenza.
The State	6,572,492	\$1,906,600	\$2,128,520	\$1,124,479	\$548,692	\$710,651	\$638,360	\$1,120,205	\$1,913,084
Adams.....	*82,188	\$ 25,512	\$ 1,605	\$ 4,942	\$ 11,581	\$ 2,506	\$ 3,451	\$ 3,443	\$ 27,993
Alexander.....	24,108	45,912	70,205	13,302	21	281	3,451	2,418	25,033
Bond.....	*16,045	15,312	70,205	3,137	51	1,306	4,601	2,168	3,113
Boone.....	*15,322	5,112		2,377	251	1,581	1,151	1,618	9,333
Brown.....	*9,336	5,112		287	331	481	111	93	3,113
Bureau.....	*42,648	5,112	11,205	5,607	6,511	3,806	2,991	5,618	12,743
Calhoun.....	*8,245	5,112		192	141	156	1,151		3,113
Carroll.....	19,479	812		6,842	281	556	171	368	163
Cass.....	17,950	5,112	3,265	15,107	1,201	2,606	111	968	15,553
Champaign.....	57,487	5,112	3,905	3,897	3,731	6,556	3,581	1,618	24,903
Christian.....	38,856	10,212		3,992	1,331	6,956	2,301	4,243	21,773
Clark.....	*21,165	5,112	6,525	3,517	41	1,506	3,451	1,618	3,113
Clay.....	*17,684	8,512	35,105	12,282	5,051	231	701	2,418	3,253
Clinton.....	22,959	5,112	22,245	2,852	1,201	1,306	11,501	5,693	9,843
Coles.....	35,168	22,012	165	3,042	491	2,856	5,751	2,043	6,273
Cook.....	3,119,741	141,200	8,385	50,922	214,391	303,206	188,601	689,593	476,343
Crawford.....	*22,771	10,212		25,772	1,061	4,356	3,451	1,818	12,443
Cumberland.....	*12,858	5,112	965	382	41	1,856	111	3,218	3,303
DeKalb.....	*31,339	5,112		2,947	1,021	2,506	2,391	368	9,393
DeWitt.....	19,288	15,312	325	6,082	1,521	1,106	6,901	3,218	9,513
Douglas.....	19,738	26,912		667	311	2,931	4,601	893	6,223
DuPage.....	43,014	2,212		1,332	3,361	3,881	2,691	7,218	3,183
Edgar.....	*25,709	5,512	645	3,612	2,111	2,656	8,051	2,418	10,523
Edwards.....	*9,431	5,112		3,232	851	2,606	3,451	1,618	3,123
Efingham.....	*19,556	10,212	165	1,997	1,071	406	2,301	1,618	53
Fayette.....	*26,187	25,512	1,625	18,717	1,051	331	5,751	3,218	12,473
Ford.....	*16,466	10,212	165	12,637	1,341	3,156	1,151	341	13
Franklin.....	60,523	61,212	70,205	59,187	2,331	931	4,601	12,818	22,273
Fulton.....	*48,163	5,112	5,505	21,297	1,061	10,156	2,501	6,418	69,233
Gallatin.....	*12,856	15,312	105,305	7,127	1,101	3,906	101	868	15,553
Greene.....	22,937	15,312		572	551	906	591	168	9,363
Grundy.....	*18,590	5,112	1,125	667	881	1,506	2,681	618	18,853
Hamilton.....	*15,920	25,512	35,105	10,702	701	606	2,301	4,343	9,333
Hancock.....	*28,523	12,612	1,445	17,862	6,071	1,531	3,191	1,618	28,073
Hardin.....	7,587	20,412	2,085	2,662	5,261		41	3,218	
Henderson.....	9,774	212	645	1,142	221	606	1,011		12,443
Henry.....	45,514	25,512		9,562	8,121	20,431	7,491	14,143	25,253
Iroquois.....	*34,841	10,012		4,467	651	4,506	3,631	3,643	9,473
Jackson.....	37,291	45,912	315,905	41,292	671	2,206	6,901	11,693	15,943
Jasper.....	*16,064	10,212	325	5,037	1,091	231	2,301	843	13
Jefferson.....	*28,480	61,212	35,105	11,402	9,461	1,306	10,351	4,018	9,473
Jersey.....	*12,682	15,312	165	11,402	2,301	456	401	443	9,473
JoDavies.....	*21,917	412		8,267	131	2,556	1,151	193	6,223
Johnson.....	*12,022	612	35,105	2,947	191	231	1,151	3,218	333
Kane.....	100,285	25,512		3,042	25,591	6,206	7,691	8,093	49,763
Kankakee.....	45,372	10,812	1,285	1,617	4,851	2,656	5,751	6,668	13,513
Kendall.....	*10,074	2,012		287	881	431	1,751	268	3,153
Knox.....	46,785	20,412		12,352	10,111	6,506	3,361	2,918	10,143
LaSalle.....	93,213	20,412	3,265	17,767	6,311	8,181	11,501	5,618	15,743
Lake.....	76,265	56,112		4,657	13,661	9,106	9,201	6,568	34,213
Lawrence.....	*21,380	20,412	12,345	9,217	3,161	3,356	5,751	2,743	3,363
Lee.....	28,030	1,202		2,567	221	5,206	1,441	843	6,233
Livingston.....	*39,070	1,212	325	5,417	1,291	4,061	4,861	2,843	9,383
Logan.....	*29,562	5,112	3,265	952	1,561	5,181	4,601	1,143	22,023
McDonough.....	27,094	7,112		2,092	1,451	1,631	1,141	818	15,893
McHenry.....	33,232	812	485	3,707	2,061	3,356	2,911	4,243	13,923
McLean.....	70,323	25,512	12,485	45,152	20,311	14,831	11,501	8,393	15,893
Macon.....	66,307	30,612	3,265	6,082	791	7,581	6,901	15,668	24,883
Macoupin.....	57,952	20,412		22,517	14,631	5,431	11,501	8,918	37,523
Madison.....	108,651	40,812	105,305	39,632	5,591	19,506	17,251	20,443	46,653
Marion.....	37,745	25,512	35,105	8,267	1,641	706	8,051	7,493	25,263
Marshall.....	*14,760	10,612	1,285	762	261	4,856	101	2,843	4,373
Mason.....	*16,634	10,212		287	71	3,956	61	318	3,223
Maesac.....	*13,559	15,312	1,920	19,632	2,111	131	5,751	5,118	123
Menard.....	*11,694	612	805	1,142	811	4,631	471	818	3,753
Merocr.....	*18,800	5,112	1,925	667	5,351	381	1,091	268	3,503

DIVISION OF COMMUNICABLE DISEASES.

609

FOR THE FISCAL YEAR JULY 1, 1920 TO JUNE 30, 1921.

Rabies.	Tuberculosis, all forms.	Meningitis epidemic.	Poliomyelitis.	Pneumonia.	Septic sore throat.	Syphilis.	Gonorrœus infection.	County total.	Per capita.
\$6,750	\$72,207,900	\$105,125	\$58,800	\$18,140,755	\$323,077	\$2,043,140	\$475,495	\$163,933,543	\$15 81
	\$ 699,100		\$ 100	\$ 112,955	\$ 6,346	\$ 11,420	\$ 4,160	\$ 915,114	14 71
	528,800		50	51,075	596	22,420	11,335	774,899	32 14
	135,800		800	47,435	326	3,420	3,785	291,459	18 17
	109,600		800	32,875	1,591		3,160	169,449	11 05
	57,200			32,875		220	60	99,883	10 70
	306,100	\$ 650		112,955	316	820	235	474,669	11 13
	120,300			21,955	1,591			153,711	18 64
	57,200	25		40,155	26	3,520	60	110,179	5 66
	83,400		2,400	61,995	36	3,320	160	195,234	10 88
	319,200	25	800	142,075	4,801	20,820	3,310	544,334	9 47
	279,900		750	127,515	3,266	6,520	1,385	470,144	12 36
	214,400			61,995	1,621		185	301,578	14 26
	238,800		1,600	36,515	216	3,920	460	349,064	19 74
	227,500	25	100	43,795	88	3,520	360	335,139	14 60
	502,000	50	50	102,035	11,241	16,320	2,885	677,814	19 27
6,300	37,208,800	50,250	14,000	9,263,915	55,276	1,100,220	221,860	49,993,262	16 02
	148,900		50	83,835	66		185	295,709	13 43
	162,000	1,840		51,075		220	285	239,408	17 92
	253,700			61,995	1,621	3,920	235	345,209	11 02
	122,700	650	100	61,995	1,621	3,320	3,535	237,899	12 33
	148,900	25	150	25,595	1,591	420		219,219	11 11
	253,700		800	80,195	4,756	820	435	364,584	8 48
	256,800	1,675	800	33,145	96	920	335	329,299	12 78
	109,600			11,035			435	141,063	14 96
	240,600			47,435	1,981	19,320	185	327,384	16 74
	319,200			65,635	46	420	160	454,139	17 34
	96,500	1,675		32,875	1,601	3,320		164,989	10 02
50	528,800		800	174,835	2,151	25,820	1,860	967,874	15 99
	371,600	1,675		120,235	7,626	11,420	1,410	635,249	13 19
	109,600	3,350		1,330	6,346			269,849	20 99
	188,200		800	40,155	16	1,220	610	258,464	11 27
	122,700	25	800	43,795	66	3,320	60	292,299	10 88
	293,000	50		69,275	3,236		235	454,399	28 54
	188,200	25	50	40,155	1,661	920	510	303,924	10 66
	148,900			14,675	326			197,580	26 04
	31,000			25,595				72,875	7 46
	424,000	25	800	120,235	7,991	1,720	4,135	669,519	14 71
	188,200	1,725	100	66,175	126	9,720	3,485	305,914	8 78
	463,300	1,725	250	87,475	3,346	25,020	710	1,032,349	27 68
	120,500	25	150	11,035	26	220	85	152,094	9 47
	594,300	1,675	1,600	102,035	3,236	220	85	845,479	29 69
	109,600		50	18,315	36	3,320	135	171,409	13 52
	162,000		50	69,275		420	135	250,813	11 44
	122,700			18,315	1,961	520	85	187,369	15 59
	1,275,500	1,675	300	287,675	6,346	24,220	8,960	1,730,574	17 26
	1,019,700		150	116,595	4,991	3,520	110	1,192,229	26 28
	44,100		50	21,955	36	620	185	75,729	7 52
	371,600	50	300	105,675	3,186	25,320	1,310	573,244	12 25
	948,000	3,350	1,500	287,675	7,931	10,820	3,335	1,351,409	14 50
	489,500	5,025	3,200	193,035	3,206	14,020	1,910	843,414	11 06
	291,300		50	51,075	1,691	4,320	435	319,219	14 93
	227,500			47,435	26		135	292,819	10 45
	162,000		800	80,195	1,591	5,720	935	280,634	7 18
	476,400	25	50	109,315	3,176	13,920	260	646,984	21 89
	253,700	25		40,155	1,681	13,120	135	338,954	12 51
	245,400		800	91,115	1,631	4,020	410	374,874	11 28
	633,600	50	800	163,912	4,912	8,820	5,160	871,344	13 81
	607,400	25	50	163,915	1,591	52,520	10,985	932,269	14 06
	214,400	1,725	800	149,355	1,711	7,720	2,410	499,354	8 62
	1,105,200		2,400	254,915	9,516	44,720	12,385	1,724,329	15 87
	371,600			83,835	1,691	3,820	3,510	576,494	15 27
	122,700	1,675		32,875			110	182,453	12 36
	188,200	75		29,235	76	1,520	935	238,169	14 32
	240,600			33,955	3,206	6,520		334,379	24 66
	135,800		50	18,315	96	3,420	460	171,184	14 64
	70,300		100	40,155	136	320	60	129,369	6 88

TABLE 6

County.	Estimated population Jan. 1, 1921.	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria.	Influenza.
Monroe.....	\$*12,839	\$ 15,312			\$ 121	\$ 1,306	\$ 1,151	\$ 693	\$ 3,113
Montgomery.....	42,031	20,412	\$ 1,445	\$14,727	8,421	4,081	1,241	5,143	21,773
Morgan.....	*33,567	6,512	2,405	3,707	8,131	7,806	2,431	1,643	3,303
Moultrie.....	14,861	1,012		2,567	1,681	1,181	2,301	268	83
Ogle.....	*26,830	1,212		14,252	1,431	7,656	3,451	818	15,603
Peoria.....	112,890	35,712	3,265	9,657	2,241	33,631	12,651	21,618	62,293
Perry.....	22,985	30,612	1,285	4,752	1,061	831	5,751	3,093	15,723
Piatt.....	*15,714	212	165	2,187	191	3,906	2,301	6,843	6,223
Pike.....	*22,866	5,112	10,565	1,142	4,511	1,331	61	3,218	3,113
Pope.....	*9,625	15,312	1,285	1,332	111	81		1,618	3,143
Pulaski.....	*14,629	20,412	175,505	4,182	1,061	1,206	211	4,818	3,343
Putnam.....	7,581		1,125		81	1,256	1,151	68	3,113
Randolph.....	*29,109	35,712	35,105	21,187	161	1,331	9,201	4,693	
Richland.....	*14,044	30,612		31,697	1,291	931		3,393	13
Rock Island.....	94,553	25,512	3,745	24,192	3,171	4,431	9,201	6,568	12,533
St. Clair.....	138,232	51,012	175,505	76,727	3,161	9,906	27,601	17,993	37,443
Saline.....	39,193	35,712	105,305	14,402	25,211	981	5,751	15,218	37,413
Sangamon.....	101,214	35,712	3,745	10,832	9,411	41,156	4,601	5,618	49,643
Schuyler.....	*13,285	5,112	3,265	2,377	111	1,206	1,151	68	3,203
Scott.....	*9,489	5,112		952	1,391	231	2,301		6,223
Shelby.....	*29,601	15,312	3,745	3,232	1,311	1,406	8,051	1,918	3,123
Stark.....	*9,693			97	1,731	1,806	1,151	93	13,263
Stephenson.....	37,837	612		25,522	2,441	3,031	2,301	4,243	9,483
Tazewell.....	39,004	15,312	3,265	5,607	321	9,331	821	2,818	16,543
Union.....	*20,249	30,612	140,405	6,652	2,111	681	471	7,693	6,233
Vermilion.....	87,004	66,312	3,745	13,112	4,421	6,156	36,801	4,168	40,513
Wabash.....	*14,034	20,412	3,205	2,381	1,061	356	1,501	3,593	3,193
Warren.....	*21,488	212	165	1,997	2,571	1,881	3,451	818	3,113
Washington.....	*18,035	15,312		2,381	141	1,706	2,301	4,193	9,453
Wayne.....	*22,772	20,412	70,205	27,267	181	581	1,151	8,743	15,553
White.....	*20,081	45,912	35,105	13,777	1,151	206	1,151	12,018	15,553
Whiteside.....	36,346	5,112	6,405	7,412	3,791	3,456	6,901	1,618	18,733
Will.....	93,791	45,912		11,782	19,961	6,231	18,401	14,168	68,733
Williamson.....	62,740	102,012	315,905	68,107	971	1,231	4,601	11,218	43,543
Winnebago.....	93,791	20,412	3,265	62,857	8,521	12,756	6,901	5,218	18,993
Woodford.....	*19,340	1,012		1,237	3,301	4,331	2,301	1,018	3,353

* Population as of Jan. 1, 1920: Decrease between 1910 and 1920; no estimate as of July 1, 1920 made.

DIVISION OF COMMUNICABLE DISEASES.

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Concluded.

Rabies.	Tuberculosis, all forms.	Meningitis epidemic.	Poliomyelitis.	Pneumonia.	Septic sore throat.	Syphilia.	Gonococcus infection.	County total.	Per capita.
	\$ 44,100			\$ 14,675	\$ 36		\$ 60	\$ 76,761	\$ 5.98
	245,400	\$1,675	\$ 50	98,395	6,021	\$18,020	4,310	451,114	10.73
	555,000	25	50	203,955	546	40,620	4,185	840,319	25.03
	70,300	50		56,515		820	510	117,388	7.90
	96,500			69,275	26	220	135	210,579	7.85
	1,485,100	1,075	2,400	349,555	9,516	72,120	15,485	2,116,919	18.74
	162,000	50		52,875	2,201	9,720	335	271,289	11.80
	148,900		50	21,955	16	420	160	193,529	12.32
	122,700		50	61,995	1,831	620	410	216,659	9.48
	122,700			11,035	1,591	3,520	135	161,863	16.82
	293,000		1,600	47,435		420	135	553,328	37.82
	57,200	75		18,315		420	135	82,939	10.94
	306,100		1,600	58,355	1,701	3,720	235	479,101	16.46
	201,300	50		18,315	1,591	3,520	3,210	295,923	21.07
	1,052,800	100	800	218,515	12,686	50,520	27,060	1,451,734	15.35
	1,432,700	3,350	2,400	411,435	7,981	76,820	17,985	2,352,009	17.01
	541,900		800	142,075	6,586	6,120	6,985	941,459	24.02
\$400	1,825,700	25	3,200	325,120	776	56,820	19,585	2,392,544	23.64
	173,800			51,075	16		3,160	244,544	18.41
	95,800			18,315		320		130,645	13.77
	253,700	50		69,275	1,731	1,020	260	364,134	12.30
	44,100			14,675	1,591	420		78,927	8.14
	266,800	50		87,475	7,931	9,220	2,085	421,194	11.13
	227,500			58,355	3,176	3,120	1,210	347,379	8.91
	777,700		800	69,275	1,901	22,520	310	1,067,364	52.71
	987,300	3,350	50	236,715	22,196	19,320	5,535	1,445,694	16.62
	122,700			14,675	1,761			174,838	12.46
	162,000	3,350		47,435	4,811	2,820	710	235,334	10.95
	122,700		100	43,795	1,591	3,320	85	207,078	11.48
	293,000	25	800	69,345	1,591		160	509,014	22.35
	240,600			69,345	166	520	160	435,664	21.70
	188,200		800	102,035	3,876	1,020	110	349,469	9.62
	1,210,000	1,650	850	273,115	6,866	8,820	13,210	1,699,649	18.12
	686,000	25	1,600	127,515	4,851	4,420	3,610	1,375,609	21.93
	817,000	5,025	800	240,355	6,406	47,420	13,285	1,269,214	13.53
	83,400	75		25,595	1,591	520	85	127,819	6.61

DIVISION OF TUBERCULOSIS.

GEORGE THOMAS PALMER, M. D., *Acting Chief*.*

Throughout the fiscal year that ended June 30, 1921, the Division of Tuberculosis continued to function along the cooperative lines established in the past and described at length in the third annual report. During the last four months of the year, however, the activities of the division were somewhat curtailed due to the resignation of the Assistant Director of the Department of Public Health, who also acted as chief of the Division of Tuberculosis. The position was still vacant at the close of the fiscal year.

Due to the very limited appropriation by the State for tuberculosis work and the continuation of the established policy of close cooperation

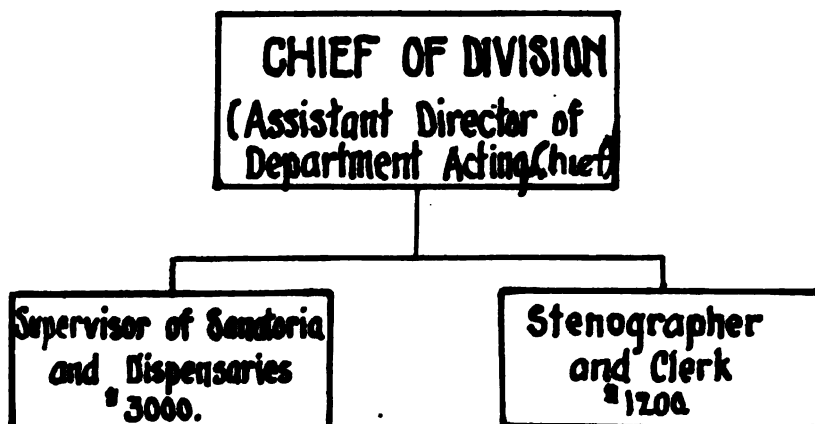


Figure XII—Divisional Organization for Biennium, 1921-23.

with the Illinois Tuberculosis Association and other governmental and extra-governmental agencies, the greater part of the anti-tuberculosis work accomplished during the year was carried out through the activities of the Illinois Tuberculosis Association and county and municipal organizations.

While the field service has been largely in the hands of other agencies, still the division has been responsible for carrying out those functions that only the State Department of Public Health is prepared and authorized to do and which have been highly important contributing factors in the success that has attended the anti-tuberculosis program in Illinois during recent years. These functions include the following:

* Resigned March 1, 1921.

1. The examination of plans for county tuberculosis sanatoria construction. Such plans must, according to law, be approved by the State Department of Public Health prior to their utilization.
2. The inspection of sites chosen by counties for the erection of sanatoria. This work has been done through the assistance of the sanitary engineers of the department.
3. The inspection of existing municipal and county tuberculosis sanatoria with especial reference to their sanitary conditions and their fitness for the purpose for which they were built.
4. The preparation and enforcement of uniform rules and regulations for the control of pulmonary tuberculosis.
5. Joint supervision over the placement and activities of community and county public health nurses.

In addition to these things, which have consumed a great amount of time, the division has prepared a popular pamphlet on the cause, prevention and care of tuberculosis. This bulletin has been widely circulated throughout the State both directly to the public and through the medium of the various organizations engaged in tuberculosis work. It has been so popular that several reprints and revisions have been necessary, the last one having been made for 25,000 copies during the fiscal year.

In performing its functions as outlined above the division has been identified with maintaining a clinical service throughout the State that has been made possible through the support and cooperation of the medical profession. This service is also participated in by county and municipal school nurses. Besides these, an average of thirty county medical society diagnostic clinics have been held during each month.

Close contact has been maintained at all times with the sixty-four tuberculosis nursing services established in various parts of the State so that reports of numerous surveys as well as other valuable data have found their way to the division. This has been due almost wholly to the cooperation of the supervising nurse of the Illinois Tuberculosis Association, since the department has not been able to fill satisfactorily the position of State supervising nurse.

During the year the division cooperated and assisted extensively in the selection of sanatoria personnel, the formation of rules for operating sanatoria and the creation of diagnostic dispensaries and nursing service. It has also given material assistance to cooperating agencies in planning and carrying out a program of the modern health crusade in which 500,000 school children were enrolled and who have been active in many public health functions, especially tuberculosis.

The widespread favorable public opinion relative to active anti-tuberculosis service on a large scale has been expressed during the year through the enormous sums of money appropriated by various counties for this work. The total appropriation by counties for sanatoria work in 1920 and 1921 amounted to \$2,664,250, or a yearly sum equal to more than twice the annual appropriation to the State Department of Public Health for the next biennium.

At the November election four new counties voted to establish tuberculosis sanatoria and the county boards of supervisors were

authorized to make the necessary appropriations. These counties were Knox, Montgomery, Rock Island and Shelby. Four other counties voted in favor of levying a definite excess tax for sanatorium maintenance purposes. These, together with the sums for which the taxes were levied, are: Christian, \$30,000 annually for five years; Macon, \$75,000 annually for five years; Madison, \$75,000; Will, \$100,000 for the first year, and \$50,000 annually thereafter for three years. Other counties that made appropriations during the year, together with the sums in each case, are: Adams, \$40,000; Boone, \$3,000; Champaign, \$90,000; Clay, \$16,000; Crawford, \$3,500; DeWitt, \$90,000; Douglas, \$15,000; Fulton, \$5,000; Grundy, \$10,000; Jackson, \$5,000; Kane, \$51,000; Livingston, \$96,000; McDonough, \$45,000; McLean, \$71,850; Piatt, \$38,000; Pike, \$12,000; Ogle, \$30,000; Tazewell, \$35,000; Vermilion, \$37,000; Whiteside, \$6,000; Winnebago, \$25,000; and Woodford, \$6,000.

The total appropriation by all counties to be expended during 1921 for tuberculosis sanatorium purposes was \$946,350. This sum, however, does not include all money available for use specified since a number of counties found surplus funds on hand that had been appropriated but not expended in previous years. Neither do the sums referred to in this report include money spent by the various extra-governmental agencies. Altogether, therefore, the figures representing the grand total of money spent in Illinois during the year for tuberculosis work runs well into the millions.

At the end of the fiscal year county tuberculosis sanatoria were in operation in Adams, DeKalb, Kane, LaSalle and McLean Counties, while sanatoria were practically completed in Champaign, McDonough, Tazewell, Morgan and Woodford Counties. Sanatoria were also in definite process of construction in Champaign, Livingston and Macon Counties. Municipal sanatoria were in operation in Chicago, Peoria, Rockford and Rock Island. In Rockford a working plan has been adopted to change the Rockford municipal sanatorium to a Winnebago County sanatorium. In Rock Island County the proposition carried to abandon the Rock Island municipal sanatorium and create a Rock Island County sanatorium. In Morgan County the municipal sanatorium voted by the people, but never erected, had been abandoned for the establishment of the Morgan County sanatorium.

In continuation of a program for the standardization of Illinois sanatoria, inspections of public sanatoria and their rating according to the plan approved by the American Sanatorium Association were completed. This work was accomplished through the joint efforts of the State Department of Public Health and the Illinois Tuberculosis Association, and the results of the study are now available for the benefit of interested people.

The results of the tuberculosis campaign in Illinois, embracing the activities of all organizations whether National, State, county or municipi-

pal, have been to reduce in a large measure the number of deaths from tuberculosis. Since the fiscal year 1917-1918, the actual number of deaths from all forms of tuberculosis in Illinois, has been reduced from 8,402 to 5,594, or a decrease of 2,808, according to the statistical records of the State Department of Public Health. During the fiscal year that has just closed the number of deaths from all forms of tuberculosis in the State decreased from 6,741 to 5,594, or a reduction of 1,147 deaths in a single year. These reductions in the actual number of deaths have been made in the face of a steadily increasing population, so that the tuberculosis death rate per 100,000 of population has shown a decrease that is gratifying indeed. The tabulation below shows the estimated population for the State, the number of deaths from all forms of tuberculosis, and the mortality rate per 100,000 people from tuberculosis for the years indicated:

Fiscal year.	Population.	Deaths from tuberculosis all forms.	Rate per 100,000 of population.
1917-1918.....	6,276,364	8,402	133.9
1918-1919.....	6,359,102	7,820	123.0
1919-1920.....	6,485,068	6,741	103.9
1920-1921.....	6,572,492	5,594	85.1

With the pronounced success that has so notably attended the anti-tuberculosis movement in Illinois in recent years has come the belief, on the part of the State Department of Public Health, that the time is ripe for a change in policy by extra-governmental and local agencies active in the field of tuberculosis, so that the scope of their service will be broadened and enlarged to cover general public health work in greater detail than is done at the present time. For example, it would doubtless work to the decided advantage of many counties in the State to appropriate sums of money similar to those noted above for the creation of a county department of health that would carry on all forms of public health service, including tuberculosis, rather than to limit such appropriations to tuberculosis and especially sanatorium construction work. Such a plan would not curtail in the least the tuberculosis work but would, on the other hand, bring to the people, especially those in rural districts, a public health service extensive enough to more nearly meet the crying needs that are apparent on every hand. As for sanatorium care for the tuberculous in the several counties, the plan would recommend that sanatoria already built or in the process of construction be operated in a way to accommodate patients from any part of the State for a reasonable cost per capita. The plan commends itself as a practical means of meeting the public health needs of the several counties. At the same time it will permit the continuation and extension of the present methods employed in fighting tuberculosis.

DIVISION OF ENGINEERING AND SANITATION.

HARRY F. FERGUSON, *Chief Sanitary Engineer.*

That portion of the laws prescribing the duties and powers of the State Department of Public Health and the rules adopted by the department in conformance with the act creating it which govern the activities of the Division of Engineering and Sanitation are listed on pages 54-55 of the third annual report of the department. No new laws have been enacted or rules adopted or changed during the fiscal year that affect the activities of the Division of Engineering and Sanitation and the work has, therefore, been carried out in accordance with the laws and rules presented in the third annual report.

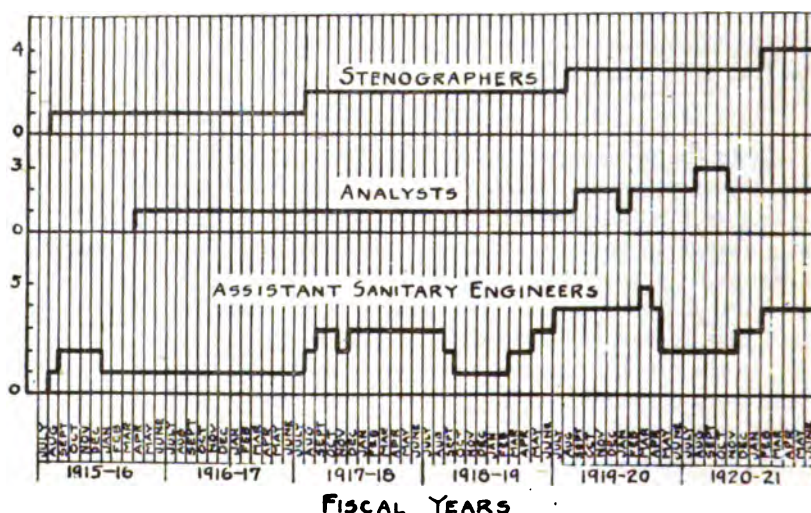


Figure XIII—Diagram showing number of technical assistants and stenographers on staff since division was established.

PERSONNEL OF THE DIVISION.

The appropriations for the fiscal year were the same as for the preceding fiscal year since the appropriations are made by the legislature for a biennium. It has not, therefore, been possible to increase the staff over that which prevailed formerly with all positions filled, but the positions that were vacant at the beginning of the fiscal year, because of resignation of some of the assistant engineers to accept positions at

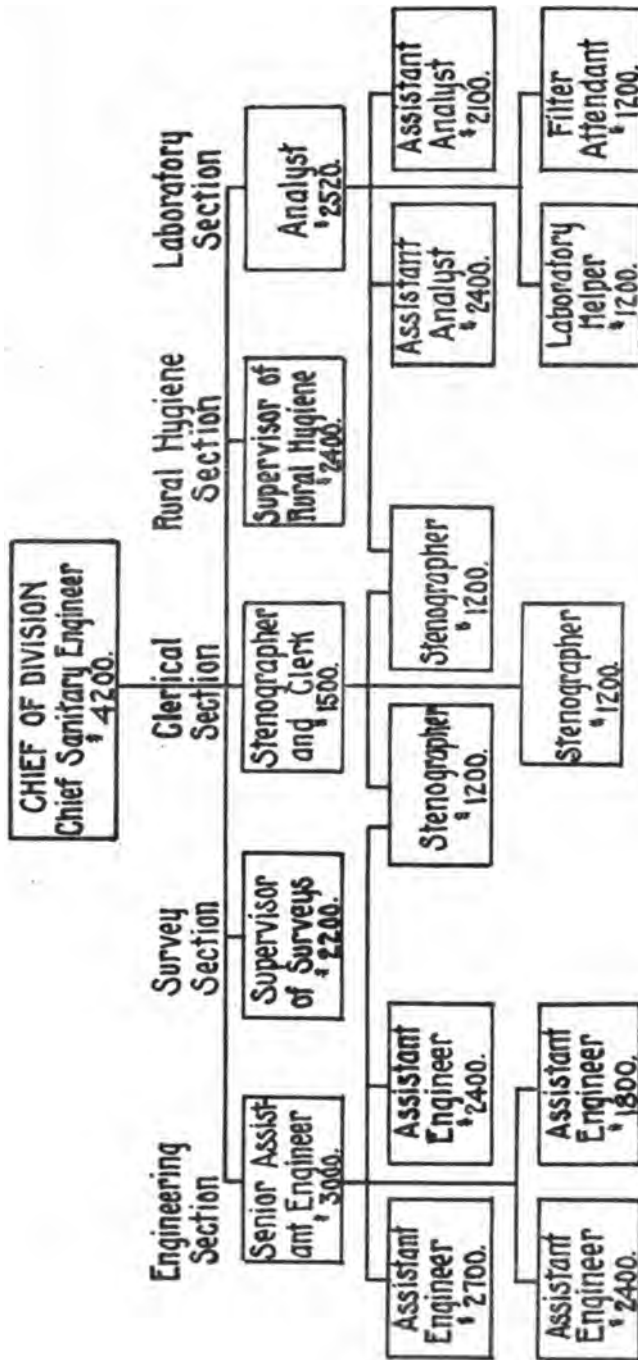


Figure XIV—Divisional organization for biennium, 1921-22.

higher salaries, have been filled. The staff, which was short three assistant engineers at the beginning of the fiscal year, comprised, at the close of the year, a chief engineer, four assistant engineers, one analyst, one assistant analyst, a laboratory helper, a water filter attendant, and four stenographers. The staff was not completed until February, 1921, and thus the division has had to handle the work with a partial staff except during the last four months. Figure XIII shows the number of assistant engineers, analysts, and stenographers on the division staff since the division was established.

With the appropriations made by the Fifty-second General Assembly (1921), which became available July 1, 1921, it will be possible to add to the staff another assistant engineer and another assistant analyst. Figure XIV shows the staff of the division for the fiscal year beginning July 1, 1921, including the two new positions soon to be filled.

ACTIVITIES OF THE DIVISION.

With no change in the laws or rules governing the activities of the Division of Engineering and Sanitation, the character of the work carried on has been the same as during the previous fiscal year. A classification of these activities is presented in the third annual report of the department on page 56. With only a partial staff during the first part of the fiscal year and changes in personnel, it was possible to give full attention only to the more important activities, and water-supply and sewerage problems have been given first consideration. With the addition to the staff during the closing months of the fiscal year it has been possible to carry on additional work.

As formerly, complete reports have been prepared on all investigations and examinations made. Copies of these reports are retained in the department files and can be consulted at any time and copies are sent, at the time they are prepared, to interested parties. These reports have of necessity been only typewritten, and since many of them would be of value if published it is again hoped that rather complete abstracts of the reports can at some time in the future be published and made available for greater use. The press of regular work has not so far permitted the preparation of such abstracts and, therefore, special requests for funds for editing and publishing reports have not been made.

WATER SUPPLIES.

First consideration is given to public water supplies, for a public water supply of good sanitary quality and adequate in quantity is undoubtedly the most important improvement in any municipality. A public water supply of questionable quality is a grave source of danger not only to residents of the city but to persons visiting the city who are not aware of its unsatisfactory quality. Assistance is given to municipalities that are installing public water supplies, improving

existing supplies, and operating waterworks systems, especially water-purification plants.

The number of field investigations made relative to public water supplies during the last three fiscal years is shown in Figure XV. The decrease in the number of assistant sanitary engineers on the staff for the first seven months of the fiscal years 1920-21, as shown in Fig. XIII, made it necessary to limit the number of investigations.

At the request of persons desiring that the waterworks in their home city be operated so as to provide a safe water at all times, a senator introduced a bill during the Fifty-second General Assembly

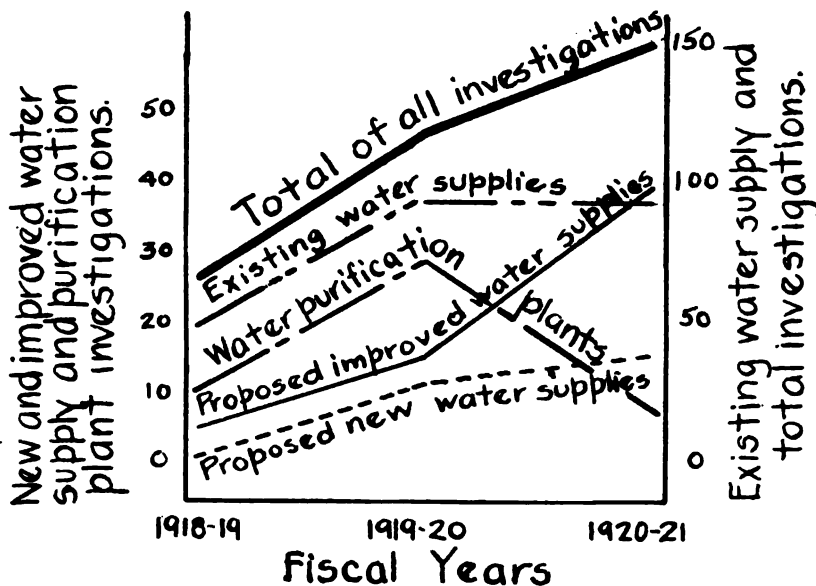


Figure XV—Number of investigations made relative to public water supplies during fiscal years 1918-19, 1919-20, and 1920-21. (See text relative to number made during 1920-21.)

that provided for the State Department of Public Health to exercise certain supervision over public water supplies. As a result of conference with representatives of the department the bill was amended to include those items found to be satisfactory in other states that had had such laws in force for a number of years. The bill passed the Senate without opposition, but unfortunately because of press of legislation it never came to a vote in the House. The activities of the division, therefore, relative to public water supplies will continue, during the coming biennium, to be the same as in the past.

PROPOSED NEW WATER SUPPLY PROJECTS.

The functions of the division in connection with new water supply projects are stated on page 57 of the third annual report. An import-

ant part of this work is the review of plans and specifications for proposed new water supplies. In reviewing proposed installations the division has the advantage of the studies made of all the existing public water supply installations in the State, and consequently the cities installing supplies are given the advantage of the experience gained in other municipalities.

The prevailing high price of materials tended to delay, as in the preceding fiscal year, the installation of new supplies. Several cities that gave consideration to making installations postponed action temporarily.

During the fiscal year installation of public water supplies was started at Erie, Hanover, and Wauconda, and investigations relative to proposed new water supplies were made by the division at the following places: Auburn 2; Dallas City, Divernon, Erie 2, Hanover 2, Frankfort, Newman, South Pekin 2, Wauconda 2, and Westville.

PROPOSED IMPROVED WATER SUPPLIES.

The increase in water consumption in a number of municipalities, caused partly by an increase in population and partly by the increased desire of people for modern sanitary conveniences, has resulted in a number of municipalities giving consideration to improved supplies. An increased public sentiment in favor of supplies of better sanitary quality and in certain instances of better mineral quality has also been a very important factor, in causing a number of municipalities to give consideration to improving existing unsatisfactory supplies. The functions of the division in connection with improvement of existing unsatisfactory supplies are similar to those for proposed new supplies, and are stated on page 58 of the third annual report.

During the fiscal year 38 visits were made relative to proposed improved water supplies as compared to 15 during the preceding fiscal year. Improvements have been started or were soon to be started at practically all of the municipalities that were visited and considered improvements. The visits were made to 33 municipalities as follows:

Altamont.	Gilman.	Oswego.
Amboy.	Harvard.	Pana.
Atlanta.	Litchfield 2.	Pittsfield.
Bloomington.	Marengo.	Princeton.
Blue Mound.	Marion 2.	Red Bud.
Carbondale.	Mascoutah.	Robinson.
Charleston.	Mt. Morris.	Rockford.
Danville 2.	Nauvoo.	Salem.
Decatur 3.	Newton.	St. Anne.
Eureka.	North Chicago.	Streator.
Galena.	Oakland.	West Frankfort.

EXISTING PUBLIC WATER SUPPLIES.

The examination of existing public water supply systems and the preparation of complete descriptive reports of such water-supply systems, with special reference to the adequacy and quality of the water supplies, has been continued. In the third annual report it was stated that there were about 475 public water supplies, of which the division had knowl-

edge. In this number were included the supplies at State and Federal institutions. At the present time records have been obtained of 459 municipal water supplies and of the water supplies at 28 State institutions and the 7 Federal institutions, army posts, and naval stations.

There is under preparation a report giving the names of municipalities having public water supplies, their populations, the sources of the supplies, the treatment, if the water is treated, and a record of the sanitary quality of the water as determined by field inspections and analyses of samples. This report is to be printed in Illinois Health News and made available separately as a reprint.

The department does not have authority to require that water supplies be made of safe sanitary quality such as is given to similar departments in most of the other states having well-organized health departments. The division, however, is often instrumental in bringing about improvements by means of reports and recommendations submitted to municipal and waterworks officials as the result of examinations made by sanitary engineers of the division. Municipal and waterworks officials are in most cases glad to be advised of the results of the inspections and to follow any suggestions made and if the officials do not act they are plainly responsible for any sickness that may result from the use of unsafe supplies.

During the fiscal year 91 visits were made to municipalities to examine existing public water supplies in addition to those places previously listed where improvements were under consideration. This is the same number of visits made during the previous fiscal year. The places visited during the fiscal year were as follows:

Alton.	Herrin.	Palestine.
Beardstown.	Hillsboro.	Pearl.
Benton.	Hoopeston.	Petersburg 2.
Bloomington 2.	Hopedale.	Quincy 2.
Buda.	Joliet.	Rankin.
Bureau.	LaMolle.	Ransom.
Carlyle.	LeRoy.	Rantoul.
Centralia.	Lewistown.	Red Bud.
Classna Park.	Manhattan.	Rockford 4.
Charleston.	Marion.	Roodhouse.
Chester.	Mattoon.	Rossville.
Christopher.	Maywood 2.	Sandwich.
Danville.	Menard.	Savanna.
Decatur.	Moline.	Seneca.
DeKalb.	Momence.	Shermerville.
Deerfield.	Mooseheart.	South Wilmington.
Dwight.	Mound City.	Spring Valley.
Earlville.	Mounds.	St. Charles.
East St. Louis.	Mt. Carmel.	Sterling.
Eldorado.	Mt. Carroll.	Stockton.
Elgin.	Mt. Sterling.	Summit.
Franklin Park.	Murphysboro 2.	Tuscola.
Freeport 2.	Newton.	Villa Grove.
Geneva.	Nokomis.	Villa Park.
Hamilton.	Olney.	Watseka 3.
Hanover.	Ottawa.	Winchester.

WATER-PURIFICATION PLANTS.

The inspection of water-purification plants which is a special phase of the examination of existing water supplies, is considered very important since improper operation of a purification plant may result in out-

breaks of sickness in a community. It was not possible at the beginning of the fiscal year to assist officials operating purification plants as much as was desired because of the limited staff, but with all positions filled at the end of the fiscal year and the increased appropriation making possible the addition of another assistant engineer and another assistant analyst to the staff, it is expected that more attention can be given to purification plants in the future and a plan adopted for regular inspections of all such plants. It will be possible to advise with the purification-plant operators and to give them the benefit of the experience gained at the other plants in the State.

During the fiscal year examinations of water-purification plants were made at Jacksonville, Marion and Salem, and of sterilization equipment only at Carlinville, Christopher and Nauvoo.

The third annual report presents in tabular form information relative to treated water supplies in the State, which table is being revised and brought up-to-date and will be published in Illinois Health News as a part of the report on public water supplies in Illinois.

SEWERAGE.

The advantages of a sanitary sewer system and the activities of the division in connection with proposed new, proposed improved, or existing sewerage installations are stated on page 60 of the third annual report. The work of the division in connection with such installations has continued the same as in the past, but it has not been possible to undertake as many examinations as the experience of the division would indicate would be desirable in order to maintain the best possible sanitary conditions in the State. It is hoped that during the coming fiscal year it will be possible to review and study the information already obtained by the division relative to existing sewerage installations and then to plan for systematic inspection of systems where information and records would indicate such to be desirable and probably result in improvement of sanitary conditions.

The number of investigations made relative to sewerage installations during the last three fiscal years is shown in Figure XVI. The decrease in the number of assistant sanitary engineers on the staff for the first seven months of the fiscal year 1920-21, as shown in Figure XIV accounts for the decrease in the number of investigations for the fiscal year 1920-21 as compared to those made during 1919-20.

PROPOSED NEW SEWER SYSTEMS.

It is easier and cheaper to have a sewer system installed properly at the start than to bring about corrections or improvements to defective systems, and full consideration is, therefore, given to proposed new installations. Plans and specifications are reviewed in accordance with the rules of the department and investigations are made relative to

proposed new installations as indicated on pages 60-62 of the third annual report.

Thirty-one visits were made relative to proposed new sewer systems as compared with 19 visits during the preceding fiscal year. The installation of several projects considered during the year has been delayed, probably in some instances because the municipalities considered

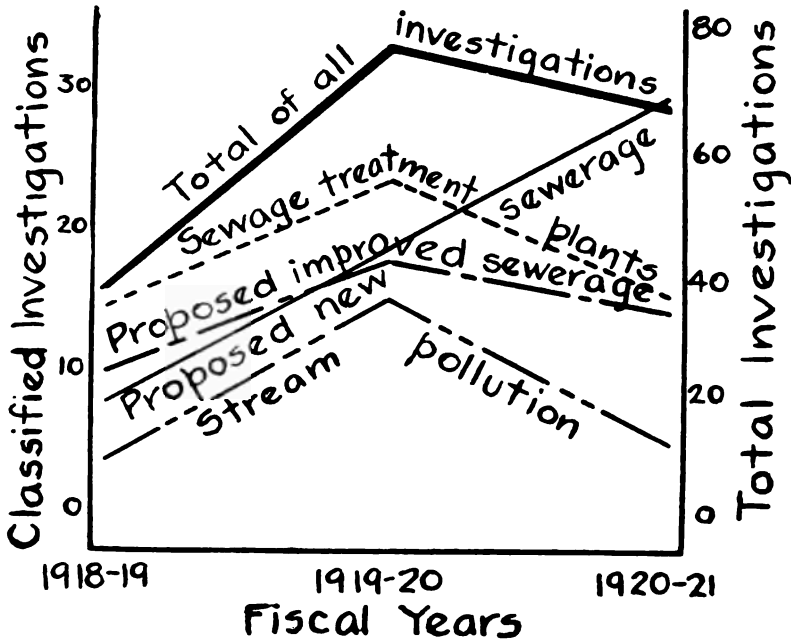


Figure XVI—Number of investigations made relative to sewerage installations during fiscal years 1918-19, 1919-20, and 1920-21. (See text relative to number made during 1920-21.)

the prevailing cost of materials still high. The municipalities visited relative to proposed sewer systems were as follows:

Amboy.	Elmhurst.**	Mound City.
Area.**	Fairbury 2.	Moweaqua.
Auburn.	Farmington 2.*	Nokomis.
Benton.	Franklin Grove.	Roodhouse.
Cary.**	Geneseo.	Sullivan.
Deerfield.	Genoa Junction, Wis.	Villa Park.
Depue.	Hanover.	Wauconda 2.
Divernon.	Maroa.	Zeigler.
Earlville.	Mascoutah.	
El Paso.	Mattoon.	

PROPOSED IMPROVED SEWERS.

The necessity of improving existing sewer systems to meet the increase in population in some cities and to correct difficulties caused by defective design and construction of old systems has naturally continued. The improvements to sewer systems are sometimes to provide

* Conference in Peoria and court hearing at Lewistown.

** Conference in Chicago.

improved sewerage facilities in the cities, and in other cases to eliminate local nuisances and stream pollution.

It is believed that most municipalities now installing sewer systems for the first time are giving more consideration to such installations than was generally customary a number of years ago, especially as regards the suitability of the design to meet an increase in growth. Therefore, new systems now being installed probably will not require the improvements and changes that some of the older systems, that were installed without competent engineering advice, require. In making improvements to existing systems made necessary because of faulty design or construction when the systems were installed, the municipalities in the majority of cases are taking advantage of past experience and planning the changes and additions to conform to future needs as well as to correct immediate difficulties.

A compilation of the sewer systems and sewage-treatment plants in the State has not yet been prepared from the reports and records based upon the inspections of such installations, similar to the tabulation of the water supplies, but such a tabulation is considered to be very desirable and will be undertaken as opportunity permits.

During the fiscal year 12 inspections were made relative to improved sewerage as compared to 18 during the previous fiscal year. These inspections were made at Alton, Bloomington, Decatur 2, Galva, Jacksonville, Marion,* Mooseheart, Mt. Vernon, Quincy, Rockford,* and Streator.

EXISTING SEWER SYSTEMS.

In addition to visits made relative to proposed new sewer systems or proposed improvements in existing sewer systems, visits were made to Atlanta, Palestine, and St. Charles to obtain full information relative to existing systems. Many other places must be visited before the records of the division will be complete.

SEWAGE-TREATMENT PLANTS.

The improper operation of sewage-treatment plants naturally has not as close relationship to the health of communities as the operation of water-treatment plants. Only in some cases would failure to operate a sewage-treatment plant greatly endanger the public health. The improper treatment of sewage, however, where local conditions show treatment to be desirable, may frequently indirectly affect the public health and generally give rise to insanitary conditions and nuisances, and the people naturally turn to health departments for relief from such objectionable conditions. The treatment or disposal of sewage, therefore, although not always a health measure is so closely interwoven with health and sanitary conditions that the question of sewage treatment can more properly be handled by the State Department of Public

* Conference in Chicago.

Health than any other State agency, and the department with its sanitary engineers and laboratory facilities is organized to handle such work.

In reviewing plans or making inspections relative to proposed sewerage installations full consideration is always given to whether or not a sewage-treatment plant will be necessary to prevent objectionable conditions and the amount of treatment that will be required. The functions and work of the division relative to sewage-treatment plants are stated on pages 63-64 of the third annual report.

A limited number of examinations of existing sewage-treatment plants has been possible during the fiscal year but because of the demands on the laboratory of the division for analyses of water supplies it has not been feasible to make many examinations combining field inspections and analytical determinations. Such information showing the results obtained at typical sewage-treatment plants in the State under actual operating conditions would be of value not only to the municipalities in which the plants are located but to engineers planning new installations and to the division in considering new or proposed improved installations. Further studies of sewage-treatment plants are, therefore, contemplated by the division.

During the fiscal year 16 examinations were made of sewage-treatment plants as compared with 24 during the previous fiscal year. These examinations were made at the following places:

Antioch.
Bushnell.
Bloomington (McLean
County Tuberculosis
Sanatorium).

Champaign.
Downers Grove.
Flossmoor.
Galva.
Great Lakes 2.

Olney.
Palestine 2.
Pontiac.
Sandwich 2.
Urbana.

STREAM POLLUTION.

The attitude of the department relative to stream pollution is indicated on page 64 of the third annual report. Stream pollution may be objectionable because of its connection with water supplies and the resultant direct effect upon public health, or because of its indirect effect upon public health, or because it simply constitutes a nuisance. Possibly the majority of cases of stream pollution at the present time may be classified merely as nuisances, but as the population of the State increases the development of water supplies from streams increases, and the relationship between health and stream pollution increases.

The department must necessarily make examinations relative to stream pollution to protect the public health, especially when public water supplies are involved, and with its laboratory facilities and sanitary engineers it can undoubtedly handle questions of stream pollution more economically than any other State agency. A division of studies of stream pollution between State agencies depending upon whether the conditions are or are not detrimental to health would eventually result in duplication of laboratory equipment, field investigations, and valuable

data and records, thus adding to the expense to the State and at the same time possibly producing lessened benefits.

During the fiscal year investigations were made of stream pollution in addition to routine investigations of sewage-disposal plants at Apple River, Bunker Hill, Chicago Heights, Flossmoor, Lewistown, and McHenry (Pistakee Bay).

TREATMENT OF INDUSTRIAL WASTES AND SEWAGES.

The attitude of the department relative to the treatment of industrial wastes and sewages is indicated on page 65 of the third annual report. During the fiscal year requests to the department have resulted in investigations being made of the treatment of industrial wastes and sewages at the following places: Apple River, dairy wastes; Chicago Heights, dye wastes; East St. Louis 2, sewage wastes; El Paso, cannery wastes; Nokomis, dairy wastes, and Sandwich, creamery wastes.

DRINKING-WATER SUPPLIES FOR COMMON CARRIERS.

The cooperative arrangement between the State Department of Public Health and the U. S. Public Health Service, perfected during the latter part of 1918, for the examination of water supplies used on interstate carriers has been continued. The method of carrying on this work is stated on pages 65-66 of the third annual report.

There are 173 common-carrier watering points now in use in 87 municipalities in the State. During the fiscal year 53 places in which one or more watering points were located were inspected and 995 samples were analyzed. The watering points examined during the year are located at the following places:

Alton 3*.	Freeport 3.	Rankin 1.
Bloomington 2.	Galena 1.	Rantoul 1.
Bluffs 1.	Golconda 1.	Rockford 4*.
Buda 1.	Harvard 1.	Roodhouse 1.
Bureau 1.	Jacksonville 1.	Rossville 1.
Centralla 2.	Joliet 3.	Salem 1.
Champaign 3*.	LeRoy 1.	Savanna 2.
Chicago 29*(2).	Mattoon 2.	Seneca 1.
Cissna Park 1.	Mendota 1.	Shawneetown 2.
Clinton 1.	Momence 1.	Springfield 6 (2).
Danville 4.	Mt. Carmel 1.	Spring Valley 1.
Decatur 5*(2).	Murphysboro 2.	Staunton 1.
DeKalb 1.	Ottawa 1.	Sterling 1.
Dwight 1.	Pana 1.	Streator 2.
East Stockton 1.	Pinckneyville 1.	Thebes 1.
Effingham 2.	Pittsfield 1.	Villa Grove 1.
Eldred 1.	Quincy 2.	Watseka 1.
Flora 1.	Ramsey 1.	

The following list shows the common-carrier water supplies certified, provisionally certified, or condemned during the fiscal year:

* Entire number of watering points not inspected.

Number in parenthesis indicates number of times places were visited, and number not in parenthesis indicates number of railroad watering points.

CERTIFIED.

Beardstown.	Effingham (2).	Ottawa.
Belleville.	Flora (b).	Pana (a2).
Bement (b2).	Forrest (b).	Pekin.
Bloomington.	Freeport.	Peoria (2).
Bureau.	Galena.	Quincy.
Bush (c).	Galesburg.	Rankin (b1).
Cairo.	Golconda (e).	Rockford (b).
Champaign (2).	Harvard (b).	Roodhouse (b).
Champaign (b*2).	Havana.	Rossville.
Chicago (1).	Highwood.	Salem (d).
Cissna Park.	Hume (a).	Shawneetown (a1-2).
Clinton.	Kankakee.	Shawneetown (b2).
Cypress (a).	Kempton.	Spring Valley.
Decatur.	Mattoon (2).	Streator.
DeKalb.	Mendota.	Taylorville (b).
Dupo (f).	Momence.	Toluca.
Dwight.	Mt. Vernon.	Urbana (2).
East St. Louis (2).	Murphysboro.	Villa Grove.

PROVISIONAL CERTIFICATION.

Alton.	Eldred (a).	Rankin (b1).
Anna.	Granville (a).	Shawneetown (a1).
Bluffs (a).	Jacksonville (f).	Staunton (b2).
Carbondale.	Mt. Carmel.	Sterling.
Chicago (1).	Mounds.	Thebes (a).
Chillicothe (b).	Pittsfield (a).	Thebes (b).
Danville.	Ramsey (a).	

CONDEMNED.

Pinckneyville.	Thebes (a).
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NOTE.—Water from public supply unless otherwise noted. a=private well. b=railroad well. c=condensed steam. d=distilled water. e=cistern. f=tank cars filled at other points. *—two different supplies. 1=certified after necessary changes or additional information. 2=supply certified twice during fiscal year. Chicago includes certificates issued for 27 roads, including one where changes in method of handling were made.

SANITARY SURVEYS.

During the fiscal year the division made studies at Quincy, as a part of a sanitary survey conducted by the Division of Surveys and Rural Hygiene, of the water supply, sewerage and general drainage conditions, street-cleaning practice, collection and disposal of municipal wastes, and general sanitary conditions.

The Fifty-second General Assembly in making appropriations for the present biennium has eliminated the Division of Surveys and Rural Hygiene, but has continued the appropriations for this work and provided for a supervisor of surveys and a supervisor of rural hygiene to be a part of the Division of Engineering and Sanitation. It is considered that this will be a more advantageous arrangement inasmuch as rural sanitation involves primarily the question of water supplies and sewage disposal and other sanitary matters dealt with by this division, and surveys in municipalities in addition to studies of vital statistic records largely comprise activities of the Division of Engineering and Sanitation.

MUNICIPAL PLUMBING ORDINANCE.

The suggestive plumbing ordinance prepared in 1917, in accordance with section 5 of an act providing for the licensing of plumbers,

in force June 29, 1917, has been furnished municipalities and individuals upon request. Copies of most of the plumbing ordinances in the State were obtained preparatory to making a revision of the suggestive plumbing ordinance, but other work has so far not permitted such revision.

NUISANCE COMPLAINTS.

The authority of the department relative to nuisances and its policy in handling nuisance complaints are indicated on page 69 of the third annual report. During the fiscal year 518 letters were written relative to nuisance complaints as compared with 320 the preceding fiscal year. This indicates a marked increase in interest in sanitary conditions in the State. The complaints covered a wide variety of subjects and are listed in the following tabulation:

Alleged cause of nuisance.	Number of complaints.
Impure water supplies.....	4
Polluted wells.....	5
Insanitary cistern.....	1
Mine wash-water.....	1
Sewers.....	22
Defective sewerage.....	3
Sewage disposal.....	25
Cesspools.....	12
Privies.....	40
Toilet facilities.....	6
Defective drainage.....	44
Obstruction of water course.....	1
Ditch pollution.....	8
Stream pollution.....	2
Defective plumbing.....	3
Sink wastes.....	2
Human excreta.....	2
Dairy wastes.....	2
Condensory wastes.....	1
Corn wastes from silo.....	1
Cider press refuse.....	2
Insanitary buildings and dwellings.....	17
Insanitary restaurants and hotels.....	41
Insanitary factories.....	1
Insanitary schools.....	3
Insanitary mining camps.....	2
Insanitary railroad washhouse.....	1
Stables and barns.....	22
Manure.....	17
Hog pens.....	56
Chicken yards.....	7
Dog kennel.....	1
Zoo.....	2
Stock yards.....	17
Slaughter houses.....	13
Poultry houses.....	11
Meat markets.....	8
Rendering works.....	1
Fertilizer plant.....	3
Carcasses.....	16
Garbage and filth.....	22
Dumps.....	12
Weeds.....	2
Screens.....	2
Fire hazards.....	3
Dust, smoke and fumes.....	11
General insanitary conditions.....	40
Total.....	518

Some of the complaints involved conditions that required investigation, in many instances to confer with local health officials to whom

generally complaints are referred. During the fiscal year the following places were visited relative to nuisance investigations:

Place.	Cause of nuisance.
Beardstown	General insanitary conditions.
Bureau	Sewage disposal.
Caseyville	Garbage disposal.
Chicago Heights	Defective sewerage.
Collinsville	Garbage disposal.
Cowden	Inadequate drainage.
Cutler	Insanitary mine wash-water.
East St. Louis	Insanitary railroad shops.
East St. Louis	Garbage disposal.
Effingham	Dairy wastes.
Evanston	Garbage disposal.
Glenview	Defective sewerage.
Grafton	Fumes from charcoal plant.
Harrisburg	Defective sewerage.
Joliet	Inadequate drainage.
Kankakee	Fertilizer plant.
LaGrange	Defective sewerage.
Lincoln	Corn wastes from silo.
Manhattan	Inadequate sewerage.
Mt. Carroll	Inadequate sewerage facilities.
Okawville	Sewage disposal at hotel.
Pearl	Hogs.
Pontiac	Meat market.
Quincy	Garbage disposal.
Robinson	Slaughter house.
Salem	Insanitary conditions.
Sesser	Inadequate drainage.
St. Charles	General insanitary conditions.
Zion City	Inadequate sewerage facilities.

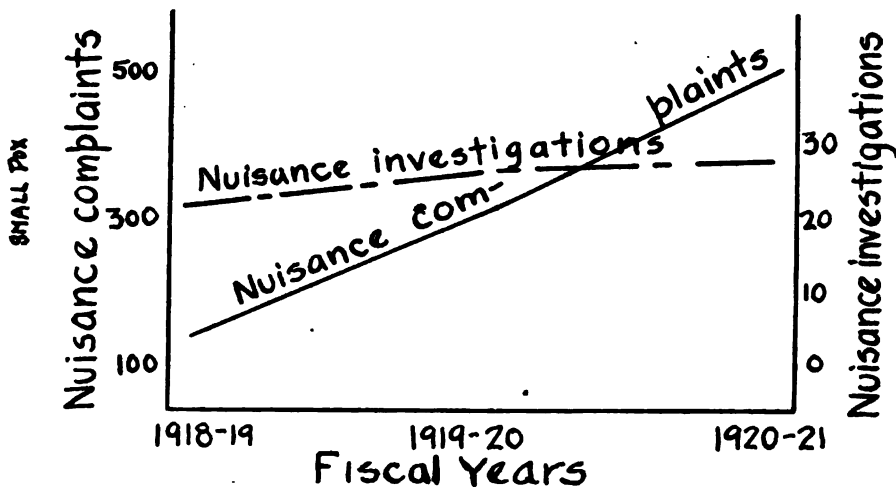


Figure XVII—Number of complaints received and investigations made relative to nuisances during the fiscal years 1918-19, 1919-20, and 1920-21.

The number of complaints of nuisances received and the number of field investigations made during the last three fiscal years are shown in Figure XVII. The number of investigations made has not increased in accordance with the increase in number of complaints received because of the method of handling complaints by correspondence with local health officials whenever possible.

WATER-BORNE EPIDEMICS.

During the fiscal year the epidemic of dysentery at Maywood caused by temporary pollution of the public water supply has fortunately been the only water-borne epidemic that required investigation by the division. The Maywood epidemic was caused by a cross-connection between the public water supply and a polluted industrial supply.

During the year the division has been responsible for the elimination of such cross-connections at several places and the chief sanitary engineer of the division has been a member of the committee of the State Sanitary Engineer's Association on cross-connections. The report of the committee will soon be made public.

Prevention of possible epidemics in this manner is naturally better health work than having to investigate epidemics. When inspecting public water supply systems effort is made to ascertain the existence of any dangerous cross-connections and to have the responsible officials have such eliminated. This brings out the fact that there are no material or spectacular things to show for some of the best work done by a health department. Elimination of cross-connections undoubtedly prevents epidemics, but the average person does not hear of or does not realize the value of such work, whereas help in the suppression of an epidemic always attracts popular attention.

TUBERCULOSIS SANATORIA.

The division cooperates with the Division of Tuberculosis in the examination of sites and the review of plans for county tuberculosis sanatoria, which sites and plans, according to the State law, must have the approval of the State Department of Public Health. The work of this division in this connection relates to water supplies, disposal of sewage, general drainage, and general sanitary conditions of surroundings. In some instances the availability of public water supplies and sewer systems makes the problem a rather easy one, but in other instances separate water supplies must be developed and suitable means provided for disposal of the sewage.

During the fiscal year investigations were made in connection with county tuberculosis sanatoria for DeKalb, Kane, McDonough, and Tazewell Counties.

SANITARY INSPECTIONS OF SCHOOLS.

An outline of the character of sanitary inspections of schools made by the division is given on page 71 of the third annual report. During the fiscal year sanitary inspections have been made of schools at Camargo, Carmi, Crescent City, Equality, Livingston, Manteno, Newman, Pontiac, Ray, and Serena.

MUNICIPAL WASTE COLLECTION AND DISPOSAL.

Studies of municipal waste collection and disposal and street cleaning, which are important phases of sanitary engineering but possibly

less important from the standpoint of public health than the question of public water supplies and sewerage, have been limited because of the amount of water supply and sewerage work that the division has been called upon to handle. During the fiscal year limited studies were made of municipal waste collection and disposal at Evanston and Quincy.

More work of this character is desirable not in order to regulate such work in the municipalities but rather to assemble the results obtained in municipalities in Illinois and to better advise with municipalities in regard to the methods used and the results obtained elsewhere. Municipal waste collection and disposal has been given careful and systematic consideration in but few municipalities, but there is a tendency for a desire for more thorough collection of wastes and cleaner conditions in municipalities and work of this nature will become more important in coming years.

MALARIA CONTROL BY MOSQUITO ERADICATION.

Other work has not permitted the division to initiate work in connection with mosquito eradication, although records continue to show that malaria is quite a prevalent disease in certain parts of Illinois. It is still hoped that a mosquito eradication campaign may be instituted at some place in Illinois not only to decrease malaria at that place, but to serve as an example to other communities of what can be accomplished by intelligent and systematic effort.

During the fiscal year an investigation was made relative to the prevalence of mosquitoes at Mounds, but it was found that the local pond of which complaint had been made was only a small contributory factor in the prevalence of mosquitoes in that district and that improvement of the pond would not give noticeable results unless other areas were also improved.

INSPECTION OF SUMMER RESORTS.

With the decreased staff at the beginning of the fiscal year it was not possible to make the studies of water supply, sewerage, and general sanitary conditions at the different summer resorts. It is again hoped that preceding and during the next season such work will be possible.

SWIMMING POOLS AND BATHING PLACES.

During the preceding fiscal year circular letters were sent out to obtain knowledge of the existence of swimming pools in the State and preliminary information relative to such pools and additional circular letters and questionnaire blanks were sent out during the fiscal year. A large number of replies were received and this information was utilized in the report of the Committee on Bathing Places of the American Public Health Association, of which the chief sanitary engineer of the division is a member. With the additional analytical assistance it is hoped that it will be possible during the coming fiscal year to study at least a few of the representative pools, especially to note the operation and success of different types of sterilizing plants.

LABORATORY SERVICE.

The service that the laboratories of the Division of Engineering and Sanitation is prepared to give and the character of the work handled are stated on pages 73-75 of the third annual report.

During the fiscal year a total of 2,494 samples were analyzed which is an increase of 57 per cent over the preceding year. The requests for analyses have been so great that it has been necessary at times to delay reporting the results, which delays are undoubtedly an annoyance to persons desiring the analyses and much regretted by the division. With the increased appropriations made by the Fifty-second General Assembly permitting the employment of an additional analyst it will be possible in the future to make more analyses and report results more promptly, although even with the additional analyst it will not be possible to make as frequent analyses of many of the public water supplies as would be desirable and studies by the division, involving a large amount of analytical work will, of course, have to be limited to provide for meeting the demands for routine analyses. In order to help meet the demands for analyses it has been necessary during the year to assign at times one of the assistant engineers to help in the laboratory.

The analyses made during the fiscal year classified by source and by months, are shown in the first of the following tables, and the analyses made since the laboratory work was started, classified by months, years, and major sources, are shown in the two other following tables and in Figures XVIII and XIX. The increase in the number of analyses made during the fiscal year as compared to preceding fiscal years has been possible because of having an extra assistant analyst for three months (see Figure XIV) and assigning one of the assistant sanitary engineers to help in the laboratory at times.

ANALYSES MADE DURING THE FISCAL YEAR JULY 1920-JUNE 1921—CLASSIFIED AS TO SOURCE AND BY MONTHS.

Month.	Supplies used on common carriers.		Other public supplies.	Private wells.*			**Mis-cellaneous.	Totals.
	Public supplier.	Private wells and other sources.		Safe.	Safe with alterations.	Unsafe.		
July.....	62	16	59	8	14	18	11	188
August.....	56	24	47	13	25	32	7	204
September.....	76	10	75	2	26	17	2	206
October.....	75	22	50	11	20	39	3	220
November.....	68	5	61	5	14	21	201	375
December.....	78	18	65	3	20	8		192
January.....	72	33	35	11	19	5		175
February.....	32	14	40	11	9	9	14	149
March.....	86	16	66	7	14	5	13	207
April.....	49	23	33	6	13	8	5	137
May.....	59	8	83	2	30	27	5	214
June.....	56	17	65	4	29	37	17	225
Totals.....	789	206	679	83	233	226	278	2,494

*Includes school wells, semi-public wells and cisterns.

**Includes analyses of sewages, ice, bottled waters and chemicals.

ANALYSES MADE SINCE LABORATORY STARTED APRIL 17, 1917—
CLASSIFIED BY MONTHS.

Month.	1917	1918	1919	1920	1921	Total.
January.....		20	14	66	175	275
February.....		27	9	102	149	287
March.....		37	23	159	207	426
April.....	11	18	35	111	137	312
May.....	15	23	73	167	214	492
June.....	9	36	70	181	225	521
July.....	6	54	100	188		348
August.....	31	62	126	204		423
September.....	14	23	160	208		405
October.....	11	23	198	220		452
November.....	11	7	155	375		548
December.....	11	17	58	192		278
Totals.....	119	347	1,021	2,173	*1,107	4,767

* Represents only six months of year 1921.

ANALYSES MADE SINCE LABORATORY STARTED APRIL 17, 1917—CLASSIFIED
AS TO MAJOR SOURCES BY FISCAL YEARS.

Year.	Public water supplies (1).	Common carrier water supplies (2).	Private water supplies (3).	Sewages, trade wastes and miscella- neous.	Total.*
1917.....	31		2	2	**35
1917-18.....	125		67	53	245
1918-19.....	196	117	186	17	410
1919-20.....	853	693	484	85	1,583
1920-21.....	1,468	995	542	278	2,494
Total.....	2,663	1,805	1,281	435	4,767

(1)—Including analyses made for common carriers.

(2)—Includes both public and private supplies used by common carriers. This work started August, 1918.

(3)—Includes school wells, semi-public wells and cisterns.

* Totals show correct total number of analyses, for certain public water supplies have been listed in both columns (1) and (2).

** From April 17, 1917 to June 30, 1917.

STATE HOUSE DRINKING WATER SUPPLY.

The record of the installation of pressure filters to remove the turbidity caused by iron in the Springfield public water supply which is used at the State Capitol Building is given in second and third annual reports, pages 73 and 75 respectively.

During the fiscal year 13,163 bottles of water were filled and distributed to drinking water stands throughout the Capitol Building and buildings in the vicinity used by State officers. This number compares with 10,403 bottles filled and distributed during 1919-20 and 12,961 filled during 1918-19. Whether or not the legislature is in session materially affects the number of bottles used.

EDUCATIONAL WORK.

The educational work of the division consists of preparation of articles for publication in periodicals, bulletins, and newspapers, the

making of public addresses on sanitary engineering and miscellaneous sanitary subjects, and preparation of an exhibit as a part of the exhibit of the department for the State and county fairs and local exhibits.

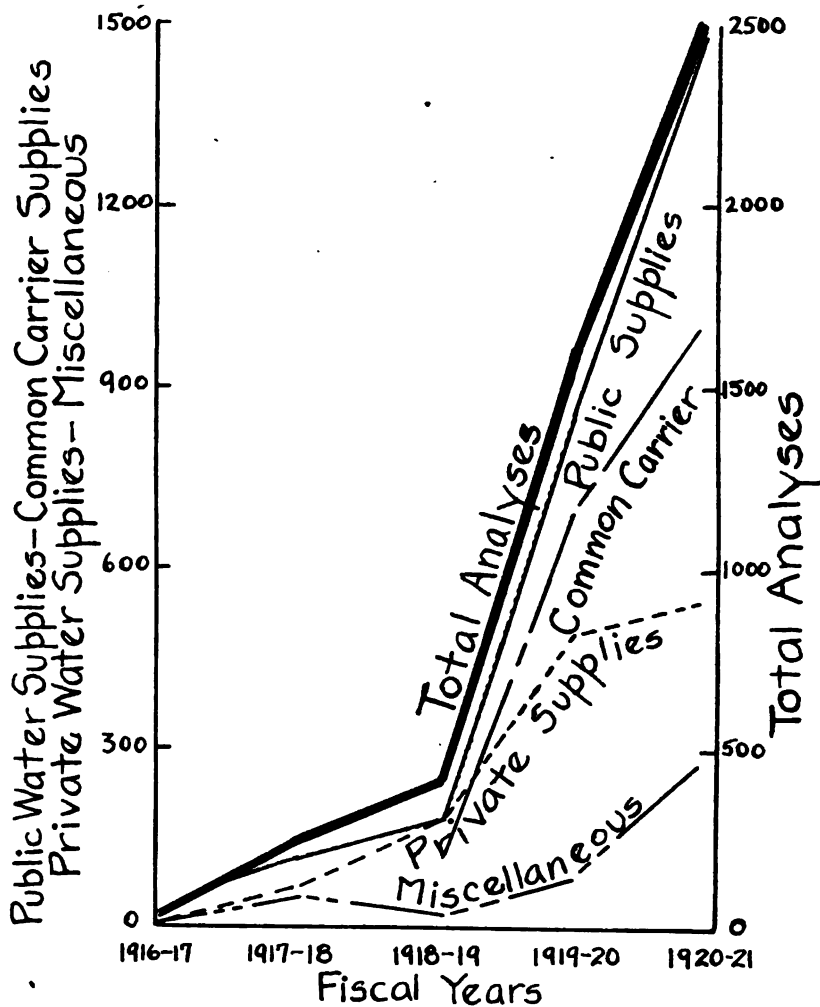


Figure XVIII—Number of analyses made each fiscal year since laboratories of division were established April, 1917.

Articles for publication must be such as to attract the interest of persons reading the respective publications and articles for newspapers must, of course, be somewhat brief and have news value. The majority of the lengthy articles have been prepared for publication in the monthly Health News issued by the department. Many of the articles for Health News are of value for permanent reference and reprints of such articles

are made so as to be available for sending out in answer to requests for information.

A considerable amount of educational work is carried on by means of correspondence. Many letters are received requesting information relative to proper construction of wells, septic tanks, small sewerage installations, and general sanitary matters. In answering letters of complaint relative to nuisances, opportunity is given to do educational work along sanitary lines.

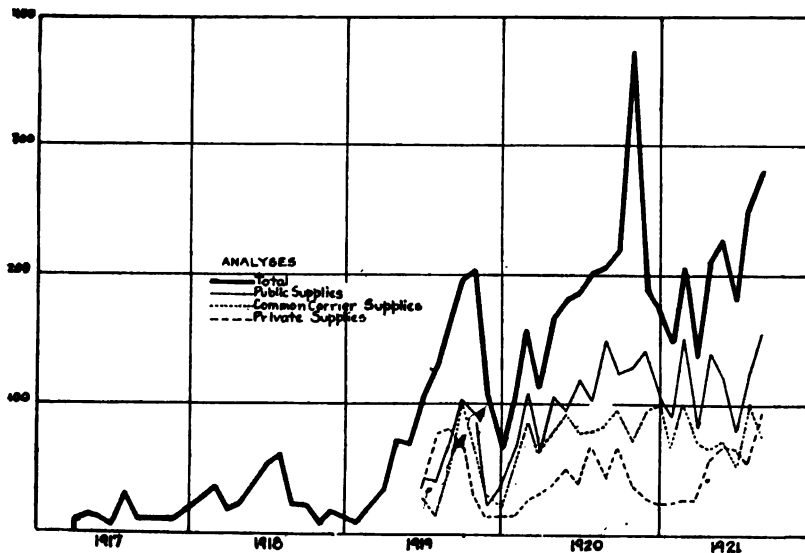


Figure XIX—Number of analyses made monthly since laboratories of division were established April, 1917.

Public addresses have been confined largely to informal talks before city councils, chambers of commerce, or other civic associations relative to water supply and sewerage projects and general sanitary improvements. During the fiscal year the following places were visited to give talks in addition to places where talks may have been given in connection with water supply or sewerage projects:

Place.	Subject.
Galva	Improved sewerage.
Mackinaw	Address at county tuberculosis sanatorium.
Mt. Vernon	Improved sewerage.
Pana	Emergency and improved water supply.
Princeton	Sanitation and sanitary ordinance.
Streator	Proposed improved sewerage.
Sullivan	Sewerage and water supply.

Meetings of the Illinois Society of Engineers, Illinois Section of the American Water Works Association, American Medical Association, American Society of Bacteriologists, and the Illinois Tuberculosis Association, and the Chicago Health Exhibit, under the auspices of the Chicago Health Department, were attended.

MISCELLANEOUS INVESTIGATIONS.

In addition to the places listed in preceding tabulations, miscellaneous investigations have been made at the following places for the purposes indicated:

Place.	Purpose of visit.
Auburn	Private well pollution.
Bushnell	Hotel inspection.
Carbondale	Swimming pool at park.
Centrailla	Sanitary conditions at roundhouse.
Champaign	Sewage experiment station.
Cherry	Mine wash-water.
Cllinton	School plumbing.
Creal Springs	Bottled water.
Danville 2	Hearing on water rates.
Johnston City	Sanitary inspection of coal camp.
Joliet	Water supply at Camp Harlowarden, Cherry Hill.
Lewistown	Inspection of Depler Springs.
Louisville	Hotel inspection.
McHenry	Pollution of Pistakee Bay.
Mooseheart	Plumbing and general sanitary conditions.
Nashville	Mine wash-water.
Okawville	Water supply Washington Mineral Springs.
Pocahontas	Mine wash-water.
Princeton	Sanitary ordinance.
Sandwich	School ventilation.
Smithfield	School well.
Tamms	Hotel sanitation.
Toledo	Sanitary ordinance.

SUMMARY OF ACTIVITIES FOR FISCAL YEAR.

The visits made and work done by the division are summarized in the following tabulation:

	1919-20	1920-21
Visits made and reports prepared relative to—		
Water supplies (total).....	200	203
General inspection of existing public water supplies.....	91	91
Proposed new public water supplies.....	11	15
Proposed improved public water supplies.....	15	38
Water purification.....	*	6
Drinking water supplies for railroad trains.....	83	53
Public sewerage installations (total).....	61	62
General inspection of sewer systems.....	**	3
Proposed new sewer systems.....	19	31
Proposed improved sewer systems.....	18	12
Sewage-treatment plants.....	24	16
Stream pollution.....	16	6
Treatment of industrial wastes and sewages.....	9	7
Sanitary surveys.....	3	1
Nuisances.....	27	29
Water-borne epidemics.....	6	1
Tuberculosis sanatoria.....	4	4
School sanitation.....	11	10
Miscellaneous subjects.....	15	27
Samples of water, sewage, trade wastes, etc., analyzed.....	1,583	2,494
Talks and addresses given and association meetings attended.....	14	13
Letters written (approximately).....	3,200	4,800

* Not recorded separately from general inspection of public water supplies in 1919-20.

** Not recorded separately from talks and addresses in 1919-20.

RECOMMENDATIONS FOR FUTURE WORK.

The third annual report called attention to the limited funds available for the division and consequently the small staff that could be engaged to carry on the work required. The small increase in appropriations made by the Fifty-second General Assembly, which became available

July 1, 1921, will make it possible to add to the staff an assistant engineer and an assistant analyst and also, it is hoped, to retain in service the present members of the staff. It will, therefore, be possible beginning with July 1, 1921, to carry on work more thoroughly than during the past two fiscal years but the staff will still be too limited to carry on intensively all of the activities enumerated on page 56 of the third annual report.

A staff to properly meet the needs and requests for sanitary engineering work in Illinois at the present time should include, in addition to the chief sanitary engineer, at least three assistant sanitary engineers for public water supply work, two assistant sanitary engineers for sewerage work including stream pollution, an assistant sanitary engineer for common carrier water supply investigations and investigations of summer resorts, an assistant sanitary engineer for sanitary inspections of school houses and general sanitary conditions, an assistant sanitary engineer for making investigations and studies of city wastes collection and disposal including street cleaning, an assistant sanitary engineer for work in connection with malaria control by mosquito eradication who would also be available for making other inspections, two assistant sanitary engineers to prepare maps, drawings, and assist in the office, five analysts, and seven or eight stenographers and clerks.

The division is accumulating a considerable amount of information relative to water supplies and sewerage that would be of interest and value to engineers, city and water works officials, and others and, therefore, it would be beneficial to the State if funds were made available for preparation of this material for publication.

There still continues duplication by different State agencies in sanitary work which not only causes extra expense to the State, but at times is confusing to persons for whom work is being done. There is no question but that all State work in connection with sanitary control of public water supplies should be handled by the State Department of Public Health which would include both field investigations and analytical work. This duplication in field work and also in making analyses, in addition to the extra expense to the State and the confusion sometimes caused to city and water works officials and others, has at times delayed the bringing about of improved sanitary and health conditions.

At the present time there are different State agencies which are interested in or do work relative to stream pollution. Stream pollution is largely a sanitary engineering problem and naturally the State Department of Public Health must make studies relative to stream pollution because public health is frequently concerned, especially when such pollution affects public water supplies.

Stream pollution is closely interwoven with sewer systems and on that account also directly or indirectly becomes a public health matter.

The Department of Public Health is instrumental in many cases in the installation of sanitary sewer systems, and because of its close association in such work it can most economically see that sewer systems are properly planned, not only to provide adequate sewerage facilities within communities, but to prevent objectionable stream pollution.

The department with its laboratories and staff of sanitary engineers is prepared to, and naturally must, handle stream pollution work when it relates to public health and it would be the most economical and satisfactory plan to require that the State Department of Public Health do all work in connection with stream pollution. This would minimize the amount of field work and analytical work and consolidate records and information of the sanitary conditions of streams in the State in a single department.

It is not feasible or desirable for the Department of Public Health to neglect entirely stream pollution investigations because of their relationship to public water supplies, but it would be feasible for any other State agency to discontinue making stream pollution investigations, for when made by other State agencies it is because a nuisance exists and the conditions do not closely relate to any other work that the other State agencies are authorized to handle.

A bill that was introduced in the Senate at the Fifty-second General Assembly (not at the request of the department), as amended, would have clarified the powers of the State Department of Public Health relative to water supply and sewerage installations, and eventually resulted in less duplication of work by other State agencies. This bill passed the Senate but unfortunately because of press of legislation did not come to a vote in the House. The bill was quite similar to laws in force in Wisconsin, Ohio, Pennsylvania, Maryland, and many other states which are in advance of Illinois as regards sanitary legislation of this kind.

If it does not seem feasible to delegate to the Department of Public Health entire jurisdiction over stream pollution, the next best solution would be the creation of a stream pollution board to be made up of the chief sanitary engineer of the State Department of Public Health, the superintendent of waterways of the Department of Public Works and Buildings, and the chief of the Division of Fish and Game of the Department of Agriculture. Members of this board would not receive additional compensation. For the economical handling of the stream pollution investigations including analytical work, the Division of Engineering and Sanitation of the State Department of Public Health would be authorized and required to make all field investigations, obtain necessary plans, maps, etc., and to do all analytical work, and then the information obtained would be considered by the board. When the pollution was found detrimental to health the power to act would be delegated entirely to the Department of Public Health; when found

only detrimental to fish life, the board would act in conformance with the request of the Division of Fish and Game; and when the pollution was merely a matter of nuisance, the board would take direct action.

The demands upon the department for assistance in improving water supplies and regulating both proposed and existing supplies are so important that it is hoped that at the Fifty-third General Assembly a bill similar to the one introduced during the Fifty-second General Assembly will be introduced and passed.

DIVISION OF VITAL STATISTICS.

SHELDON L. HOWARD, *Registrar.*

In 1917 the Division of Vital Statistics was created under the Civil Administrative Code for the purpose of enforcing the model birth and death registration act that was placed upon the statute books in 1915. Since that time the organization of the division has grown from a force of seven employees to a personnel of twenty-four, with duties and functions as expressed in the organization chart, Figure XX. The scope of work carried out by the division was correspondingly increased, so that the close of the fiscal year, July 1, 1920-June 30, 1921, finds the vital records of the State in better condition and more comparable with those of other states than at any previous time in the history of Illinois.

When the division was organized two important objects were outlined in its policy. These were to gain admission into the United States Registration Area for deaths and births. The first of these was accomplished in 1918, and while the second has not yet been realized, such material improvement in the completeness and character of birth reports has been observed during the last fiscal year that the future seems full of hope and promise that the time is near at hand when Illinois will be recognized by the Federal Bureau of the Census as one of the registration states.

During the year more vigorous measures have been employed to bring about complete and accurate birth registration than the department has ever been able to institute before. Based upon past experiences these and other divisional activities have been carried out along the lines discussed under the various sections into which this report is divided.

VIOLATIONS.

The policy of past years in listing all reports of violations of the State law from local registrars and other sources for the subject of investigations either by field agents or correspondence has been continued. Careful records of all files are kept with special attention to cases of individuals who persistently and flagrantly fail in observing the law. These records are kept in convenient form for constant reference and for the use of the Director of the State Department of Public Health.

A list of violations for each month is prepared in quadruplicate so that copies may be placed in the hands of the Director and working copies maintained in the division for the use of the registrar, the assistant registrar and file clerks. The average number of violations per month

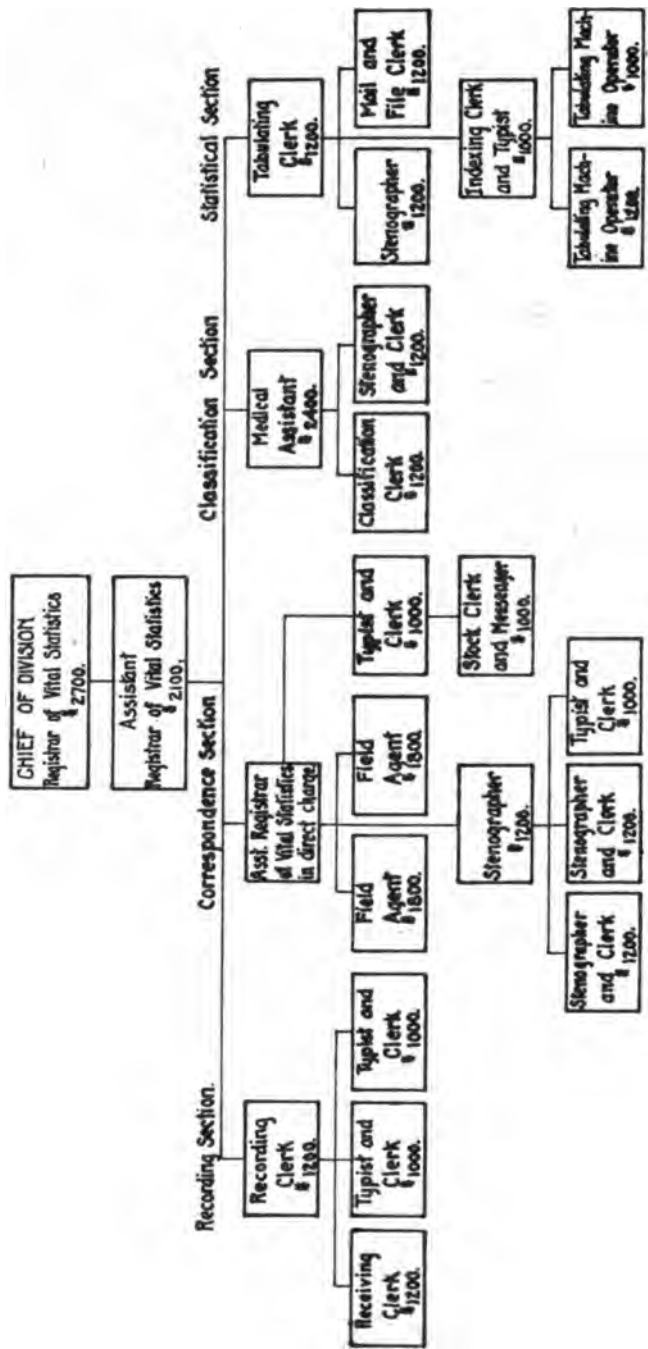


Figure XX—Divisional Organization for Biennium, 1921-23.

during the fiscal year that ended June 30, 1921, was 52 compared with 53 for the preceding year, so that the work of the assistant registrar and several of the field agents devoted to making investigations of violations, has been continued. Incidentally, whenever field agents are delegated to investigate violations of the law, they are advised also to employ every means for giving added instruction to local registrars, and in the investigation of complaints they are instructed to weigh all cases with respect to the qualifications of the registrar and the question of wilful violations.

During the year it became apparent that a large number of undertakers have habitually disregarded the law in regard to obtaining permits for burial and for disinterment and removal of bodies. To overcome this situation the division has communicated with the sextons throughout the State and has sought and obtained in a gratifying measure their co-operation in compelling undertakers to obtain proper official credentials. This is an easy matter on the part of the sexton since he can refuse burial until those in charge of burials present to him certificates properly executed. It is felt that the accomplishment of this piece of work has placed death registration upon a basis of a maximum degree of completeness.

DELINQUENTS.

Delinquent registrars, especially as their work relates to birth reports, have been the source of many and perplexing problems. One means after another has been employed to solve these problems with the result that a gradual improvement in the promptness with which birth reports are received and in the decrease of the number of delinquent registrars, has been noted. In addition to the usual procedure of immediately notifying all delinquent registrars at the end of each month, the division carried out a special campaign during the early months of the fiscal year and cleared up 221 out of 354 serious situations where reports had been incomplete or totally lacking for the six preceding months.

Lists of delinquent registrars are prepared for the information of the Director of the department at the end of each month, and additional copies of these lists are made for the information of the registrar, his assistant and the several field agents. During the fiscal year a monthly average of 283 delinquencies on the part of local registrars or 19 per cent of the total number of registrars were recorded. This corresponds very favorably with a monthly average of 340 delinquencies or 22.7 per cent of the total number of local registrars for the preceding fiscal year.

The complete investigation of a large number of cases of delinquency has brought to light the fact that many such cases result from the change in local registrars because of election, or by the removal of registrars (and these without the knowledge of the department) to other communities. This situation gives rise to the induction into office of new men who are not familiar with the law and the rules and regulations of

the department and who, therefore, innocently violate the provisions thereof. Added to these situations it has been found also that many of the local registrars have come into office without proper qualifications for carrying on work as important as that required.

To overcome these difficulties and as a means of instructing every delinquent registrar as to the scope and character of his duties, a series of form letters has been designed to answer the more common questions relating to their work. Supplemental to these, field agents have been advised to call upon all delinquent registrars in their districts and give personal instructions along the lines discussed in the form letters. It has been necessary during the fiscal year to send these letters of instruction to a fewer number of local registrars than in former years. This leads to the belief that not only the local officials, but the public in general, are coming to appreciate more intelligently and to understand better the provisions of the vital statistics law.

REPORTS OF LOCAL REGISTRARS.

During the fiscal year a marked improvement has characterized the manner in which local registrars have made their reports to the division. The habit so common in former years of transmitting to the division birth and death certificates daily or as frequently as they were received, has been almost completely overcome and has been replaced almost uniformly by the habit of sending in the certificates on the tenth day of each month as required by law. Not only has the time of sending in reports been more satisfactory than ever before, but a very marked improvement in the character of certificates of births, stillbirths and deaths has been observed also. This improvement is attributed in a large degree to the extension of various forms of educational methods used to correct errors made by the local registrars in reporting.

Another important error, that of sending certificates intended for the county clerks to the State Department of Health, so common in former years, has been practically eliminated. This has been brought about by referring back to the registrars all copies of birth certificates that were not on the original forms, along with the form letter requesting them to supply this office with the original forms and to file the duplicates with the local county clerk.

The matter of issuing annual statements for fees due to local registrars for their services has been greatly facilitated during the year as a result of a system outlined in the third annual report, whereby a transfer of credits was made for certificates wrongly forwarded to the department by local registrars in cases where fees due for registration of births or deaths that occurred outside of their districts were claimed. This system of effecting transfers of credits has worked to the decided saving of stenographic help and to the issuing of annual statements for fees with much greater dispatch than was ever possible before.

COMPLETION OF DEFECTIVE CERTIFICATES OF BIRTH.

While birth reports have gradually improved in character with the expansion and increased activities of the division, still a large number of those received from rural districts and small villages fail to contain important data. In many cases the name of the child is completely lacking. While a marked improvement has been noted during the year in this respect, still the department has outlined a policy in order to stimulate future improvements, whereby no certificates of registration of births will be issued to parents in cases where original reports are not complete in all particulars.

DEFECTIVE CERTIFICATES OF DEATH.

In the third annual report of this division it was shown that approximately 10 per cent of the death certificates received by the division were defective in one or more essential details, and that it was consequently necessary to carry on extensive communication with undertakers, local registrars and physicians for the purpose of making accurate and complete death records.

During the fiscal year just ended the continuation of the same policy has brought about a considerable improvement in the character of death certificates, although the division still finds it necessary to carry on considerable work in this respect.

MEDICAL AND OCCUPATIONAL CLASSIFICATION.

The efforts of the division to secure essential information on death certificates relative to medical classification, has borne fruit. This is demonstrated by the fact that a considerable improvement has been noted on all certificates, especially those applying to deaths from violence, casualty or undue means. Considerable difficulty still obtains, however, in reference to securing complete information relative to deaths from cancer, where it is necessary to state the primary location, and from deaths ascribed to pneumonia, broncho-pneumonia and acute nephritis, and otherwise unqualified.

Changes in the classification of deaths made by the International Conference which met in Paris last year went into effect in this State January 1, 1921. The new card gives distinctive numbers to poliomyelitis, epidemic meningitis and encephalitis lethargica, all of which are important in the administration of public health. Adoption of this new classification by the State will prove to be of decided advantage in the future study of vital statistics, since it makes them standard with National and international figures.

Since early in February, 1921, a division record has been kept of certificates which lacked medical and occupational data. During that period there were received from points outside of Chicago, 1,786 certificates that required correction in medical classification, 552 in occupational classification, and 72 in medical and occupational classification, or

a total of 2,410. During the same period a total of 16,522 certificates of death from all causes were received, so that the number for which corrections were necessary amounted to practically 16 per cent of the total.

REPORTS OF COMMUNICABLE DISEASES.

During the past year, as formerly, reports of deaths ascribed to reportable communicable diseases have been made daily to the Division of Communicable Diseases, while the reports of deaths attributed to venereal diseases have been reported daily to the Division of Social Hygiene.

REGISTRATION OF OLD BIRTH REPORTS.

A new significance that attaches to the registration of births on account of increased child labor legislation and the consequential demand for certification of births that occurred prior to the time when the present act became effective, was referred to in the third annual report. The means employed for meeting the demand for these old birth reports have been continued during the fiscal year, all local registrars being supplied with proper legal forms in all cases where these have been required. The old reports have all been properly bound and indexed, so that ready reference may be had to them at any time.

CORONER'S CERTIFICATES OF DEATH.

During the fiscal year many physicians throughout the State have continued the unlawful practice, referred to at length in the third annual report, of signing certificates of deaths from undue or violent means whereas all such cases are subject to a coroner's investigation and the certificates should bear his signature. The practice has resulted in considerable confusion of more or less legal moment and has been the subject for a great deal of correspondence on the part of the division in its efforts to make the necessary corrections.

In seeking the reason for the rather extensive and persistent nature of these errors many investigations have been carried out during the year. These have shown, almost without exception, that the source of error rests in the wording of instructions to physicians that appear on the standard death certificate blank. It has, therefore, seemed advisable to recommend to the United States Bureau of the Census that these instructions be altered and changed in a way to simplify and make more positive the regulations that govern coroner's cases, and such recommendation has been made. A procedure of this kind would, it is felt, bring about a solution of the problem that has presented many and complicated difficulties for a number of years.

DIRECTORY OF LOCAL REGISTRARS.

A complete revision of the directory and book of practical instruction of local registrars, has been made and will shortly be issued for the

use of physicians, local registrars and undertakers. It now contains full and up-to-date information necessary for the proper execution of all matters relating to birth and death registration, as well as a list of local registrars and the boundaries of districts in each case. This directory and book of instruction will be, as nearly as possible, placed in the hands of all practicing physicians in the State, outside of Chicago, and in the hands of undertakers and local registrars and district health superintendents as well.

The combination of registration districts, based upon the investigation of field agents, has continued during the past fiscal year and will continue in the future so long as it is apparent that the law can be better fulfilled. In June, 1920, there were 1,498 registration districts compared with 1,471 on June 30, 1921. These districts include 2,702 primary districts.

UNSATISFACTORY LOCAL REGISTRARS.

Unfortunately the recommendation of this division for certain changes in the vital statistics laws relative to the appointment and control over local registrars was not made by the Fifty-second General Assembly, and the unsatisfactory status that has prevailed in the past continues. In spite of every effort to the contrary many county clerks still fail to receive regularly complete and accurate copies of all certificates forwarded by the local registrars to the State Department of Public Health. The reasons for this and other highly unsatisfactory situations were pointed out in the third annual report and no means for improvement other than legislation have yet presented themselves. On the other hand, the division has been able to accomplish a considerable improvement in many respects (as described elsewhere in this report) through systematic methods of instruction which are made the more necessary on account of frequent changes in local registrars.

In this connection it is again urgently recommended that the vital statistic law be amended so that township clerks, as such, will be eliminated as registrars and that a provision be made whereby more convenient places for registration may be established and local registrars appointed without regard to township office and under more direct supervision of the State Department of Public Health. To this is added a recommendation for an amendment to the same law providing for local registrars to forward copies of certificates to the State registrar only, who will in turn make duplicate copies for county clerks and the Federal Bureau of the Census. In this way all prevailing difficulties connected with keeping accurate and uniform records in the county, State and Nation will be largely overcome and the matter placed on a basis that will insure complete accuracy in every detail with but slight, if any, increase in ultimate cost.

FIELD INVESTIGATIONS.

The two field agents of the division, one of whom is on part-time employment with the Division of Social Hygiene, have been particularly active during the fiscal year, and have not only done more effective service, but have covered more territory than ever before. The scope of their work embraces: (a) surveys of hospitals and other institutions for the purpose of obtaining complete vital statistics data; (b) investigations of conditions looking to the combination of districts; (c) settlement of disagreements in the payment of fees; (d) investigations of law violations; (e) instruction and investigation of unsatisfactory local registrars; (f) conference with undertakers, physicians and local registrars in cases where other methods have failed to secure cooperation. In addition to these things, special investigations were conducted by the field agents in 40 counties to ascertain the names of physicians who persistently fail to report births with the result that 131 delinquent names were brought to light and means employed to insure more complete reporting from them in the future.

During the fiscal year the registration districts in 84 counties were visited against 64 for the preceding year. The names of the agent assigned and the counties visited are:

F. C. BLANDIN.

Adams.	JoDavless.	Mercer.
Boone.	Kane.	Ogle.
Brown.	Kankakee.	Peoria.
Bureau.	Kendall.	Platt.
Carroll.	Knox.	Rock Island.
Champaign.	Lake.	Schuyler.
DeKalb.	LaSalle.	Stark.
DeWitt.	Lee.	Stephenson.
DuPage.	Livingston.	Tazewell.
Ford.	Logan.	Vermillion.
Fulton.	Macon.	Warren.
Grundy.	Marshall.	Whiteside.
Hancock.	Mason.	Will.
Henderson.	McDonough.	Winnebago.
Henry.	McLean.	Woodford.
Iroquois.	McHenry.	

DR. H. T. BURNAP.

Adams.	Jefferson.	Randolph.
Bond.	Jersey.	Richland.
Cass.	Lawrence.	Sangamon.
Christian.	Macoupin.	Scott.
Clinton.	Madison.	Shelby.
Clay.	Marion.	St. Clair.
Coles.	Menard.	Wabash.
Cumberland.	Monroe.	Washington.
Edwards.	Morgan.	Wayne.
Effingham.	Montgomery.	White.
Greene.	Moultrie.	Williamson.
Hamilton.	Perry.	
Jackson.	Pike.	

Due to these personal visits by the field agents the division has on file a great deal of invaluable information relative to local conditions that serves as a guide in clearing up problems that otherwise would be extremely difficult of solution. The activity of the field agents has also resulted in obtaining a greater and a more cordial cooperation from

all those people upon whom the department must largely depend for fulfilling the provisions of the vital statistic laws. It is believed that a more extensive amount of personal contact with local registrars and others (which might be brought about through agreement with the Division of Communicable Diseases whereby district health officers could frequently be assigned to this work), would be the quickest and surest means for overcoming many of the difficulties and problems that have always been associated with the collection of vital statistic records and would hasten the day when birth reports would be filed sufficiently complete to make Illinois eligible for the Federal Registration Area.

INDEXING AND TABULATING.

The office machinery for indexing and tabulating all certificates of deaths, births and stillbirths, has been so organized and extended during the fiscal year that this matter is now for the first time carried on as a regular routine activity. Heretofore the limited office facilities made it possible to index only death certificates, but since January 1, 1921, birth certificates have also been indexed. At the close of the fiscal year all death certificates from the State, outside of Chicago, for 1920 had been indexed and the close of the next fiscal year will find the same thing true of both death and birth certificates for 1921.

As a result of the system now in operation the division has available for immediate reference any data provided for on the standard certificate of death pertaining to deaths that occurred in the State, outside of Chicago, during 1919 and 1920. This information is comparable in every detail with that of any territory included in the Federal Registration Area. The same kind of data will be available in the future for both births and deaths, but the former will not be comparable with figures for units in the Federal Registration Area until the State has been admitted into that area for births.

STATISTICAL REPORTS.

During the fiscal year the demand for various statistical reports has been greater than usual. Of particular interest and importance among these was the tabulation of infant mortality in the State for 1920, and the working out of figures showing the number of births reported compared with the number that probably actually occurred. Other reports that carry unusual interest are:

Mortality record of Illinois, showing deaths (exclusive of stillbirths) from all causes and from diseases of major sanitary importance, by counties and by principal cities and towns, for July 1, 1920-June 30, 1921, inclusive. This table has been arranged to include all cities of the State which had 10,000 or more population according to the census of 1920. (See table 7, p. 652.)

A record by counties and principal cities and towns of all births reported for the fiscal year 1920-1921. (See table 8, p. 658.)

A summary of the statistics of births and deaths (exclusive of stillbirths), for Illinois with rates per 1,000 population (revised in accordance with the census of 1920) for the years 1916-1920, inclusive. (See table 9, p. 660.)

A table that indicates the probable degree of completeness of birth and death registration for the calendar years of 1919 and 1920, and shows the probable deficiencies in the number of births reported for these years from the State, city of Chicago, and State exclusive of Chicago. (See table 12, p. 668.)

A comparison of the annual mortality summaries for Illinois, for the years 1917-1920, inclusive, covering the diseases reportable to the United States Public Health Service. (See table 10, p. 661.)

Deaths of infants, (exclusive of stillbirths) by color, by nativity of white mother and by counties and principal cities and towns during the year 1920. (See table 10a, p. 662.)

Deaths, all causes, by months, cause and color by counties, during the year 1919.

Deaths, all causes, by months, cause and color by principal cities and towns during the year 1919.

Deaths, due to the puerperal state, by age groups, color, nativity of whites and by counties.

In addition to the above, numerous mortality tables for minor districts and cities, rate tables and comparative tables, were compiled in response to requests received from various sanitary engineers, physicians, public health nurses, collegiate instructors, public school teachers and pupils, and considerable data bearing on accidents, etc., was furnished to certain technical trade papers and health papers for publication.

COOPERATION WITH OUTSIDE ORGANIZATIONS.

Throughout the year the division has continued to render all possible assistance to various organizations of the country which desired aid in statistical studies. The organizations chiefly served were: The United States Public Health Service; the Children's Bureau; the Eastern and Central divisions of the American Red Cross; the State Committee on Tuberculosis and Public Health of the State Charities Association, and the National and State Tuberculosis Associations.

MISSIONARY WORK.

Under the head of missionary work all the educational work accomplished through other than regular channels is included. This consists of such items as public addresses by members of the division, discussions at intra-departmental conferences of various characters, material for the public press and exhibits prepared for public display. During the year a great deal of time and effort has been devoted to work along these lines, and it is believed to have had a decidedly beneficial effect upon the public mind.

The exhibit material prepared by the division seems particularly worthy of note. Various kinds of attractive wall panels and charts that depict the more important vital statistic subjects were designed and displayed on a number of occasions where visitors from all over the State were present. This equipment, sufficient in quantity to utilize the space in a booth 20 feet long and 10 feet deep, has attracted widespread and favorable attention and has already been reserved for use in a large number of communities during the coming year.

REGISTRATION IN COOK COUNTY.

Since the population in Cook County is equal to nearly half of that of the entire State, the registration of births and deaths in that county has an important bearing upon the records of the State. It is, therefore, very gratifying to note that during the fiscal year Cook County

showed a very marked improvement along all lines of vital statistic reports.

The improvement has been due largely to two reasons. First, all local registrars (of whom there are more than 80) have received settlement for all back fees and arrangements have been made whereby fees will be more promptly paid in the future. Second, the health department in Chicago has carried out a vigorous campaign relative to birth registration that resulted in a great increase in the completeness of returns.

BIRTH REGISTRATION.

Engraved certificates of birth registration that were designed by the department and placed in the hands of the division to be filled out and forwarded to the parents of all children whose births are properly recorded, have not been issued with the dispatch desired, because of insufficient clerical help. On the other hand, the proportion presents such great possibilities for stimulating favorable public opinion in behalf of complete and satisfactory birth registration that arrangements have recently been made at the suggestion of the new Director of Public Health, to secure the cooperation of all divisions of the department in carrying out the program in a creditable fashion. The forms have also been improved so that their value to the parents and the children concerned will be greatly enhanced.

Two pieces of new work that have an unusually important bearing upon satisfactory birth registration have been accomplished during the year. One was the completion of a directory that embraces all hospitals and institutions in operation in the State. This book, that has already become of invaluable service in facilitating the work of the division in correcting errors in birth reports, was completed only after a prolonged task of the most painstaking and tedious nature.

The other piece of work grew out of and was made possible by the first. Placards of an attractive character, designed for the purpose of calling constantly to the attention of physicians the importance of carefully observing the birth registration law, were distributed and caused to be prominently posted in the more than 600 institutions listed in the directory. This work, as well as that relating to death certificates from institutions, was greatly facilitated through the hearty cooperation that was obtained from the State Department of Public Welfare. Communications already received, together with a noticeable improvement in the character and completeness of statistical reports from a large number of the institutions, lead to the belief that the task was well worth the time and efforts spent.

BINDING AND FILING CERTIFICATES.

During the fiscal year the division found it advisable, for the first time, to undertake the binding of all certificates on hand for the years

1916 to 1920, inclusive. This work had been postponed from year to year because, for one reason or another, a considerable number of old certificates continued to be received. It became apparent during the latter part of the year, however, that records for past years were as nearly complete as could ever be expected so that the work of binding was undertaken and completed.

The system of numbering and filing certificates in the chronological order of their receipt, adopted on January 1, 1921, has proved to be entirely unsatisfactory from every standpoint, due in large measure to the unavoidably delayed reports from many quarters. It is, therefore, strongly recommended that the old system of filing together, by months and irrespective of time of receipt, all certificates from each county be readopted. Experiences, both in this and other states, have demonstrated that the latter is the most practical system of filing that has yet been devised.

POPULATION REVISIONS.

On the basis of the fourteenth Federal census that was taken in January, 1921, the division has made a complete revision of population figures for the various political units of the State. It is interesting to note that 46 counties showed an increase and 56 a decrease in population, compared with the 1910 census. Revised estimates of the population of all counties and principal cities in the State for each six months period since July 1, 1915, are now available.

CONCLUSION.

In conclusion it may be said that the work of the division during the fiscal year has been more extensive in scope and more efficient in character than for any previous year. For this the new Director of Public Health deserves no little credit since he has from the first exercised a deep interest in the work and has offered many and valuable suggestions. The Civil Service Commission is also commended for its uniform success in filling the vacancies in the division with exceptionally capable employees. It is believed that the extension of the policies that have been worked out during recent months will result in placing the vital statistic records of Illinois among the best and most complete in the country.

TABLE 7—MORTALITY RECORD OF ILLINOIS, DEATHS, (EXCLUSIVE OF STILL-IMPORTANCE, BY COUNTIES, AND PRINCIPAL CITIES

Counties with important cities and towns.	Estimated population Jan. 1, 1921 (mid-year).	Deaths—all causes.	Death rate per 1,000 population.	Diseases of major sanitary importance.					
				Typhoid Fever.	Malaria.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.
The State.....	6,572,492	71,034	10.8	370	76	29	353	361	549
Adams.....	162,188	835	13.4	5			6	2	3
Quincy.....	135,978	478	15.3	2			6		1
Alexander.....	24,108	322	13.4	9	2				3
Cairo.....	15,271	247	16.2	6	1				3
Bond.....	116,045	136	8.5	3	2			1	4
Boone.....	115,322	157	10.2	1				1	1
Brown.....	19,336	78	8.4	1					
Bureau.....	142,648	391	9.2	1			3	1	2
Calhoun.....	18,245	70	8.5	1					1
Carroll.....	19,479	125	6.4						
Cass.....	17,050	150	8.4	1	1		1	2	
Champaign.....	57,487	526	9.1	1	1		1	1	3
Champaign.....	16,229	202	12.4				1	1	1
Urbana.....	10,450	255	(2)	1					
Christian.....	38,856	416	10.7	2			1	1	2
Clark.....	121,165	195	9.2	1	2				3
Clay.....	117,684	160	9.0	1	1	2	3		
Clinton.....	22,959	198	8.6	1			2	1	10
Coles.....	35,168	418	11.9	4			2		5
Mattoon.....	15,768	198	14.4	3					2
Cook.....	3,119,741	34,535	11.1	30	1	2	146	188	164
Berwyn.....	16,008	266	(2)				21		
Blue Island.....	11,772	279	(2)				1	6	2
Chicago.....	2,754,899	30,028	10.9	26	1		138	168	150
Chicago Heights.....	20,181	224	11.1	1				2	5
Cicero.....	48,131	302	6.3				4	2	4
Elgin.....	(1)	(4)							
Evanston.....	38,496	411	10.7	2				2	3
Forest Park.....	11,193	249	(3)						
Maywood.....	12,488	266	(2)						
Oak Park.....	41,980	519	12.4				1	3	
Crawford.....	122,771	223	9.8	2		2	1	2	3
Cumberland.....	112,858	118	9.2	1				1	
DeKalb.....	131,339	314	10.0	1					2
DeWitt.....	19,288	210	10.9	3			1	1	6
Douglas.....	19,738	163	8.3	5				1	4
DuPage.....	43,014	297	6.9					3	1
Edgar.....	125,769	317	12.3	1			2		7
Edwards.....	19,431	97	10.3	1			1	2	3
Effingham.....	119,556	185	9.5	2					2
Fayette.....	126,187	222	8.5	5			1		5
Ford.....	116,466	148	9.0	2				1	1
Franklin.....	60,523	511	8.4	12	2	1	4		4
Fulton.....	148,163	504	10.5	1	1	1		5	2
Canlon.....	10,976	166	14.2					1	1
Gallatin.....	112,856	98	7.6	3	3		3		1
Greene.....	22,937	194	8.5	3					
Grundy.....	18,580	176	9.5	1					2
Hamilton.....	115,920	166	10.4	5	1	1	2		2
Hancock.....	128,523	279	9.8	2			2		2
Hardin.....	7,587	66	8.7	4			5		
Henderson.....	9,774	77	7.9						1
Henry.....	45,514	475	10.4	5		1	2	6	6
Kewanee.....	16,718	2101	(2)	1			2	2	1
Iroquois.....	34,841	356	10.2	2				3	3
Jackson.....	137,291	410	11.0	9	9	1	1		2
Murphysboro.....	11,035	254	(3)	2	2				2
Jasper.....	116,064	87	5.4	2					2
Jefferson.....	128,480	355	12.5	12	1		9	1	9
Jersey.....	112,682	117	9.2	3			2		

BIRTHS) FROM ALL CAUSES, AND FROM DISEASES OF MAJOR SANITARY
AND TOWNS, JULY 1, 1920-JUNE 30, 1921 INCLUSIVE.

Diseases of major sanitary importance.

Diphtheria.	Influenza.	Rube (in man) Hydrophobia.	Pulmonary Tuberculosis.	Tuberculosis—other forms.	Chronic Bronchitis.	Cerebro Spinal Fever (Epidemic Cerebro Spinal Meningitis).	Acute Anterior Poliomyelitis (Infantile Paralysis).	Pneumonia—all forms.	Septic Sore Throat	Syphilis.	Gonococcus Infection.
1,243	597	2	4,939	655	259	63	66	4,948	190	419	41
4	5		48	5	3			31	4	3	1
1	2		50	4				19	4	3	1
3	2		33	7	1			14		3	3
1	6		22	5	1			11		2	3
2	1		9	1			1	13		1	
2	3		6	2	1		1	9	1		1
	1		3	1				9			
7	4		19	4	1	1		31			
	1		4	1				6	1		
			3	1	1			11		1	
1	5		4	2			3	17		1	
2	8		22	2	1		1	39	3	5	
1	2		7	1	1		1	14	1	4	
5	7		17	4				3	2	1	
2	1		14	2	2		1	35	2	2	
3	1		16	2				17	1		
6	2		15	2	1		2	10		1	
2	2		30	8				11		1	
	1		11	2				28	7	4	
762	151	2	2,595	345	111	30	11	2,545	34	218	12
51			10	1				15	1		1
6		1	1	1				2			
698	184	1	2,049	298	99	28	8	2,854	80	198	9
4	3		9	3	1			24	2		
7			21	2	1	1	1	26	1	1	
14	1		19	4	1	1	2	20			1
31			33					23			
			27					24			
6	8		14	2	1			30	2	2	1
2	4		10	1		2		23			
4	1		10	2		1		14			
	3		15	4				17	1	1	
4	3		9		1	1		17	1	1	1
1	2		11		1			7	1		
9	1		18	1			1	22	3		
3	3		19	1		1	1	6			
2	1		7	1				3			
2			15	3				13	1	6	
4	4		21	3				18			
			5	2	1	1		9	1	1	
16	7		35	5	1		1	48	1	7	
8	22		24	4		1		33	4	3	
2			6	1				6	2		
5	10		8	2	1			4			
	3		11	3				11			
1	6		8	1			1	12		1	
5	3		21	1	1			19	2		
2	9		10	4		5		11	1		
4			11	1		1		4			
	4		2					7			
16	8		26	6	1	1	1	33	5		1
14	2		4	3	1			11	2		
4	3		10	4		1		18		2	1
12	5		33	2	2			24	2		
29			27					23		2	
1			7					3			
5	3		43	2	2	1	2	28	2		
	3		7	1				5		1	

TABLE 7—MORTALITY RECORD OF ILLINOIS, DEATHS, (EXCLUSIVE OF STILL-IMPORTANCE, BY COUNTIES, AND PRINCIPAL CITIES

Counties with important cities and towns.	Estimated population Jan. 1, 1921 (mid-year).	Deaths—all causes.	Death rate per 1,000 population.	Diseases of major sanitary importance.					
				Typhoid Fever.	Malaria.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.
The State.....	6,572,492	71,034	10.8	370	76	29	353	361	549
Adams.....	162,188	835	13.4	5	—	—	6	2	3
Quincy.....	135,978	178	13.3	—	—	—	6	—	1
Alexander.....	24,106	322	13.4	9	2	—	—	—	3
Caico.....	15,271	247	16.2	—	1	—	—	—	3
Bond.....	116,045	136	8.5	3	2	—	—	1	4
Boone.....	115,322	157	10.2	1	—	—	—	1	1
Brown.....	19,336	78	8.4	1	—	—	—	—	—
Bureau.....	142,648	391	9.2	1	—	—	3	1	2
Calhoun.....	18,245	70	8.5	1	—	—	—	—	1
Carroll.....	19,479	125	6.4	—	—	—	—	—	—
Cass.....	17,950	150	8.4	1	1	—	1	2	—
Champaign.....	57,487	526	9.1	1	1	—	1	1	3
Champaign.....	16,229	202	12.4	—	—	—	—	1	1
Urbana.....	16,450	235	(2)	—	—	—	—	—	—
Christian.....	38,856	416	10.7	2	—	—	1	1	2
Clark.....	121,165	195	9.2	1	2	—	—	—	3
Clay.....	117,684	160	9.0	1	1	2	3	—	—
Clinton.....	22,959	198	8.6	1	—	—	2	1	10
Coles.....	35,168	418	11.9	4	—	—	—	—	5
Mattoon.....	15,768	198	14.4	5	—	—	—	—	2
Cook.....	3,119,741	34,535	11.1	30	1	2	146	188	164
Berwyn.....	16,006	366	(2)	—	—	—	31	—	—
Blue Island.....	11,772	279	(2)	—	—	—	—	6	2
Chicago.....	2,754,899	30,028	10.9	26	1	—	158	168	130
Chicago Heights.....	20,181	224	11.1	1	—	—	—	4	5
Cicero.....	48,151	302	6.3	—	—	—	4	2	4
Elgin.....	(4)	(4)	(4)	—	—	—	—	—	—
Evanston.....	38,496	411	10.7	2	—	—	—	2	3
Forest Park.....	11,198	249	(2)	—	—	—	—	—	—
Maywood.....	12,488	266	(2)	—	—	—	—	—	—
Oak Park.....	41,960	519	12.4	—	—	—	1	5	—
Crawford.....	122,771	223	9.8	2	—	2	1	3	3
Cumberland.....	12,858	118	9.2	1	—	—	—	1	—
DeKalb.....	131,339	814	10.0	1	—	—	—	—	2
DeWitt.....	19,288	210	10.9	3	—	—	1	1	6
Douglas.....	19,738	163	8.3	5	—	—	—	1	4
DuPage.....	43,014	297	6.9	—	—	—	—	3	1
Edgar.....	125,769	317	12.3	1	—	—	2	—	7
Edwards.....	19,431	97	10.3	1	—	—	—	2	3
Effingham.....	119,556	185	9.5	2	—	—	1	—	2
Fayette.....	126,187	222	8.5	5	—	—	1	—	5
Ford.....	116,466	148	9.0	2	—	—	—	1	1
Franklin.....	60,523	511	8.4	12	2	1	4	—	4
Fulton.....	148,163	504	10.5	1	1	1	—	5	2
Canton.....	10,976	166	14.2	—	—	—	—	1	1
Gallatin.....	112,856	98	7.6	3	3	—	3	—	1
Greene.....	22,937	194	8.5	3	—	—	—	—	—
Grundy.....	118,580	176	9.5	1	—	—	—	—	2
Hamilton.....	115,920	166	10.4	5	1	1	—	—	2
Hancock.....	128,523	279	9.8	2	—	—	2	—	2
Hardin.....	7,587	66	8.7	4	—	—	5	—	—
Henderson.....	9,774	77	7.9	—	—	—	—	—	1
Henry.....	45,514	475	10.4	5	—	1	2	6	6
Kewanee.....	16,718	2101	(2)	1	—	—	2	2	1
Iroquois.....	34,941	356	10.2	2	—	—	—	3	3
Jackson.....	137,291	410	11.0	9	9	1	1	—	6
Murphysboro.....	11,035	264	(2)	2	2	—	—	—	2
Jasper.....	116,064	87	5.4	2	—	—	—	—	—
Jefferson.....	128,480	355	12.5	12	1	—	9	1	9
Jersey.....	112,682	117	9.2	3	—	—	2	—	—

BIRTHS FROM ALL CAUSES, AND FROM DISEASES OF MAJOR SANITARY AND TOWNS, JULY 1, 1920-JUNE 30, 1921 INCLUSIVE.

Diseases of major sanitary importance.

Diphtheria.	Influenza.	Rabies (in man) Hydrophobia.	Pulmonary Tuberculosis.	Tuberculosis—other forms.	Chronic Bronchitis.	Cerebro Spinal Fever (Epidemic Cerebro Spinal Meningitis).	Acute Anterior Polomyelitis (Infantile Paralysis).	Pneumonia—all forms.	Septic Sore Throat	Syphilis.	Gonococcus infection.
1,243	597	2	4,939	655	259	63	66	4,948	190	419	41
4	5		48	5	3			31	4	3	1
1	2		30	4				19			
3	8		33	7	1			14		3	1
1	6		22	5	1			11		3	3
2	1		9	1			1	13		1	
2	3		6	2	1		1	9	1		1
	1		3	1				9			
7	4		19	4	1	1		31			
	1		4	1				6	1		
			3	1	1			11		1	
1	5		4	2			3	17		1	
2	8		22	2	1		1	39	3	5	
1	2		7	1	1		1	14	1	4	
1	1		7	1				3	2	1	
5	7		17	4	2		1	35	2	2	
2	1		14	2				17	1		
3	1		16	2			2	10		1	
6	3		15	2	1			11		1	
2	2		30	8				28	7	4	
	1		11	2				16	4	4	
762	151	2	2,595	345	111	30	11	2,545	34	218	12
31			310	31				31			
5		1	1	1				13	1		1
698	124	1	2,049	298	99	28	8	2,254	20	198	9
4	5		9	3	1			24	2		
7			21	2	1	1	1	26	1	1	
14	1			4	1	1	2	20			1
22			33					33			
31			27					34			
6	8		14	2	1			30	2	2	1
2	4		10	1		2		23			
4	1		10	2		1		14			
	3		15	4				17	1	1	
4	3		9		1	1		17	1	1	1
1	2		11		1			7			
9	1		18	1			1	22	3		
3	3		19	1		1	1	5			
2	1		7	1				3			
2			15	3				13	1	6	
4	4		21	3				18			
			5	2	1	1		9	1	1	
16	7		35	5	1		1	48	1	7	
8	22		24	4		1		33	4	3	
2	10		6	1				6	2		
5			8	2	1			4			
	3		11	3			1	11			
1	6		8	1			1	12		1	
5	3		21	1	1			19	2		
2	9		10	4	5			11	1		
4			11	1	1			4			
	4		2					7			
16	8		26	6	1	1	1	33	5		1
14	2		4	3	1	1		11	2		
4	3		10	4		1		18		2	1
12	5		33	2	2	1		24	2	7	
28			27					23		28	
1			7					3			
5	3		43	2	2	1	2	28	2		
	3		7	1				5		1	

TABLE 7—

Counties with important cities and towns.	Estimated population Jan. 1, 1921 (mid-year).	Deaths—all causes.	Death rate per 1,000 population.	Diseases of major sanitary importance.					
				Typhoid Fever.	Malaria.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.
Jo Davies.....	121,917	213	9.7	-----	-----	-----	-----	1	1
Johnson.....	112,022	85	7.1	-----	1	-----	-----	-----	1
Kane.....	100,285	1,390	13.9	6	-----	-----	11	3	6
Aurora.....	37,076	456	12.3	3	-----	-----	1	1	4
Elgin.....	27,606	527	22.7	-----	-----	-----	2	-----	-----
Kankakee.....	45,372	703	15.5	2	-----	-----	-----	1	5
Kankakee.....	17,039	216	12.6	2	-----	-----	-----	1	4
Kendall.....	110,074	95	9.4	-----	-----	-----	-----	-----	1
Knox.....	46,785	509	10.9	4	-----	-----	2	5	3
Galesburg.....	24,014	309	12.9	3	-----	-----	2	4	1
LaSalle.....	92,213	1,027	11.0	4	1	-----	6	5	10
LaSalle.....	15,406	173	13.1	3	-----	-----	-----	-----	2
Ottawa.....	10,948	281	(2)	-----	-----	-----	-----	1	1
Streator.....	14,833	206	13.8	1	-----	-----	4	-----	1
Lake.....	76,265	741	9.7	11	-----	-----	13	7	8
Waukegan.....	19,552	205	10.5	2	-----	-----	2	1	4
Lawrence.....	121,380	200	9.4	4	3	-----	3	2	5
Lee.....	28,030	245	8.7	-----	-----	-----	-----	4	1
Livingston.....	139,070	324	8.3	-----	-----	-----	1	2	4
Logan.....	129,562	319	10.8	1	1	-----	-----	3	4
Lincoln.....	11,884	185	16.3	-----	-----	-----	-----	2	1
McDonough.....	27,094	273	10.1	1	1	-----	-----	1	2
McHenry.....	33,232	357	10.7	-----	-----	-----	-----	-----	-----
McLean.....	70,323	813	11.6	5	-----	2	6	6	10
Bloomington.....	56,029	583	13.2	4	-----	-----	5	1	6
Macon.....	66,307	729	11.0	6	1	-----	-----	2	5
Decatur.....	45,124	571	12.7	6	-----	1	-----	2	10
Macoupin.....	57,952	483	8.3	4	-----	-----	9	-----	10
Madison.....	108,651	1,200	11.0	8	3	5	3	15	15
Alton.....	26,418	284	11.2	3	1	-----	-----	2	2
Granite City.....	15,857	166	10.9	2	-----	2	2	1	2
Marion.....	37,745	409	10.8	5	1	-----	2	-----	7
Centralia.....	12,781	270	(2)	-----	1	-----	-----	-----	1
Marshall.....	114,760	129	8.7	2	-----	-----	-----	3	-----
Mason.....	116,634	142	8.5	2	-----	-----	-----	-----	-----
Massac.....	113,559	144	10.6	3	-----	1	2	-----	5
Menard.....	111,694	100	8.6	-----	-----	-----	-----	4	-----
Mercer.....	118,800	175	9.3	1	-----	-----	2	-----	-----
Monroe.....	112,839	66	5.1	3	-----	-----	-----	1	1
Montgomery.....	42,031	469	11.2	4	-----	-----	5	1	1
Morgan.....	133,567	575	17.1	1	-----	-----	4	2	2
Jacksonville.....	16,753	448	28.4	1	-----	-----	2	-----	1
Moultrie.....	14,861	137	9.2	-----	-----	-----	-----	-----	2
Ogle.....	126,830	275	10.2	-----	-----	-----	-----	4	3
Peoria.....	112,890	1,466	13.3	7	1	1	1	14	11
Peoria.....	77,066	1,033	13.4	5	1	-----	-----	6	4
Perry.....	22,985	253	11.0	6	-----	-----	1	-----	5
Piatt.....	15,714	107	6.8	-----	-----	-----	-----	3	2
Pike.....	126,866	245	9.1	1	-----	-----	1	1	-----
Pope.....	19,625	97	10.1	3	-----	-----	-----	-----	-----
Pulaski.....	114,629	174	11.9	4	5	-----	1	1	1
Putnam.....	7,581	62	8.2	-----	-----	-----	-----	1	1
Randolph.....	129,109	255	8.8	7	1	-----	-----	1	8
Richland.....	114,044	177	12.6	6	-----	1	-----	1	-----
Rock Island.....	94,553	968	10.2	5	1	1	1	1	8
Moline.....	51,408	316	10.1	2	-----	-----	-----	-----	3
Rock Island.....	56,293	554	9.2	3	1	1	-----	1	3
St. Clair.....	138,232	1,424	10.3	10	5	1	3	4	25
Belleville.....	26,806	273	10.8	-----	1	-----	-----	-----	4
East St. Louis.....	67,813	768	11.4	6	3	1	2	2	21
Saline.....	39,193	381	9.7	7	3	-----	24	-----	5
Sangamon.....	101,214	1,240	12.3	7	1	-----	8	14	4
Springfield.....	59,957	878	14.6	5	1	-----	2	17	-----
Schuyler.....	113,285	132	9.0	1	1	-----	-----	-----	1

Continued.

Diseases of major sanitary importance.											
Diphtheria.	Influenza.	Rabies (in man) Hydrophobia.	Pulmonary Tuberculosis.	Tuberculosis—other forms.	Chronic Bronchitis.	Cerebro Spinal Fever (Epidemic Cerebro Spinal Meningitis).	Acute Anterior Polomyelitis (Infantile Paralysis).	Pneumonia—all forms.	Septic Sore Throat	Syphilis.	Gonococcus Infection.
4	2		11	1				19			
8	16		80	17	1			6	1		
6	6		21	7	5			79	4	4	
3	6		32	6	4	1		24	2	2	
8	4		74	5	5			31	1	2	
	1		12	3				32	3	1	
	1		3					14			
2	3		23	5	2			6			
1	2		14	3	2			29	2	7	
7	5		68	4	5	2	2	18	2	3	
			6	1				79	5	2	
1			9	1	1			16	2	1	
	2		6		1			11			
6	11		32	5	2	1	4	24	2	4	
	2		9			3	1	53			
3	1		13	2	1			10	2		
1	2		14	3				14	1	1	
3	3		10	2	4		1	13			
1	7		35	1	2			22	1	1	
	3		30	1				30	2	2	
1	5		16	3	1			16		1	
5	4		24	2	2		1	11	1	4	
9	5		44	4	3	1	1	25	1	1	
2	2		22	3	1	1		45	3	2	
17	8		41	5	1			24	3	1	
18	6		32	6				45	1	10	1
9	12		15	1	5	1	1	37	1	9	1
25	15		74	10	8		3	41	1	2	
13	2		18	1	2			70	6	9	
	1		14	1			1	15	1	1	
4	8		25	3	2			4	2	3	
3	1		8	1				23	1	1	
3	1		12	2				6		1	
6	1		18					9			
1	1		8	2				8			
	1		5					9	2	2	
	1		3		2			5		1	
4	7		24	2	2	1		11			
1	1		37	5				4			
	1		34	1	1			27	3	4	1
			7		4			56		10	1
1	5		6	1				31		9	
27	20		105	8	2	1	3	10			
24	14		43	6	2	1	3	19			
2	5		10	2	4			96	6	16	2
3	2		7	4	1			70	5	13	2
4	1		6	3				9	1	3	
2	1		7	2	1			6			
6	1		20	2			2	17	1		
	1		3	1				3	1	1	
5			19	4	3		2	13			
4			14	1				5			
5	4		67	11	6		1	16	1	1	
2			20	5	3			5	1	1	1
2	3		24	6	1		1	60	8	7	
21	12		98	11	9	2	3	15	2	2	1
	5		20	2	2			21	6	1	
7	6		65	9	2	2	3	27	5	15	2
19	12		39	2	2			22		1	
7	16		132	7	4		4	67	4	10	2
2	9		48	4	3		3	39		1	
	1		12	1				88		10	4
								60		10	4
								14			1

TABLE 9—STATISTICS OF BIRTHS AND DEATHS FOR ILLINOIS, WITH RATES PER 1,000 POPULATION, THE YEARS OF 1916, 1917, 1918, 1919 AND 1920
(Exclusive of stillbirths).

Area.	The State: total.						Chicago.						State exclusive of Chicago.					
	Population, estimated (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Reported deaths.	Death rate per 1,000 population.	Population, estimated (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Reported deaths.	Death rate per 1,000 population.	Population, estimated (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Reported deaths.	Death rate per 1,000 population.	Population, estimated (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.
1920.....	6,528,898	120,360	18.4	82,132	12.6	3,798,302	50,303	18.4	34,841	12.8	3,800,584	70,057	18.4	47,291	12.4	3,800,584	70,057	18.4
1919.....	6,441,874	110,770	17.2	77,538	12.0	2,473,108	46,051	18.6	33,484	12.5	3,760,548	66,719	17.7	44,034	11.7	3,760,548	66,719	17.7
1918.....	6,354,462	117,035	18.4	103,138	16.2	2,591,914	46,762	18.0	44,058	17.0	3,732,548	87,348	18.0	59,533	15.7	3,732,548	87,348	18.0
1917.....	6,297,350	108,808	17.4	96,231	13.8	2,558,739	46,558	18.3	33,058	14.8	3,698,530	59,240	16.0	48,178	13.0	3,698,530	59,240	16.0
1916.....	6,180,038	114,288	18.5	81,345	13.2	2,513,526	47,769	19.0	36,304	14.4	3,664,512	66,529	18.2	45,041	12.3	3,664,512	66,529	18.2

* Revised estimates, based on the United States Censuses, April 15, 1910 and January 1, 1920.

TABLE 10—COMPARISON OF ANNUAL MORTALITY SUMMARIES, ILLINOIS, YEARS 1917, 1918, 1919 AND 1920.

Diseases.	Deaths occurring in—					
	1917		1918		1919	
	State, Chicago not included.	City of Chicago.	Total.	State, Chicago not included.	City of Chicago.	Total.
Anthrax in man.....	0	0	0	0	0	0
Dengue.....	0	0	0	0	0	0
Diphtheria.....	497	1,228	1,725	432	592	1,024
Infuenza.....	•	•	17,879	3,803	1,767	5,562
Leptosy.....	•	•	•	0	0	0
Malaria.....	106	3	108	77	84	161
Measles.....	523	243	766	278	101	379
Meningitis (epidemic cerebro spinal).....	124	199	322	71	46	117
Pneumonia (all forms).....	49	187	236	7,445	3,353	10,798
Polymyositis (acute infectious).....	1	•	•	119	106	225
Rabies (in man).....	1	•	•	2	3	5
Rabies (in animals).....	10	10	20	10	10	20
Rocky Mountain Spotted (or tick) fever.....	168	622	790	109	118	227
Scarlet fever.....	28	34	62	10	15	25
Septic sore throat.....	•	•	•	•	•	•
Syphilis.....	3,291	7,114	10,405	4,343	2,705	7,048
Tuberculosis (pulmonary).....	4,263	3,800	8,063	4,683	3,244	7,927
Tuberculosis (all forms).....	477	43	520	485	31	516
Typhoid fever.....	0	0	0	0	0	0
Typhus fever.....	0	0	0	0	0	0
Totals.....	6,245	6,363	12,608	24,707	9,380	34,087
Totals with Pneumonia and Influenza excluded.....	6,245	6,363	12,608	6,354	4,270	10,624

* Not included in this report. † Included in Tuberculosis (all forms). ‡ Not reported.

TABLE 10A—POPULATION, REPORTED BIRTHS WITH BIRTH RATES PER 1,000 POPULATION OF 22.3—BIRTH RATE FOR FEDERAL REGISTRATION AREA, YEAR OF 1919, WITH DEATHS OF INFANTS UNDER 1 YEAR OF AGE, WITH DEATH RATES PER 1,000 WITH ESTIMATED INFANT MORTALITY RATES BASED ON PROBABLE NUMBER BIRTHS ACTUALLY REPORTED AND BIRTH RATES ESTIMATED FOR TOTAL POPULATION OR OVER. CALENDAR YEAR OF 1920.

Area.	1	2	3	4	5	6			
	Estimated revised population as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Probable number of births based on rate of 22.3.	Probable deficiencies or excesses in reports.	Deaths of infants under 1 year of age (exclusive of stillbirths).			
						Less than 1 day.	Less than 1 week.	Less than 1 month.	1 month.
Adams County.....	62,188	1,116	17.9	1,387	-271	12	16	4	9
Quincy.....	35,378	701	19.5	802	-101	9	14	4	7
Alexander County.....	24,044	414	17.2	536	-122	9	8	5	3
Cairo.....	15,237	235	15.5	349	-107	4	6	4	1
Bond County.....	16,045	273	17.0	358	-95	1	2	4	1
Boone County.....	15,322	247	16.1	342	-95	6	8	1	2
Brown County.....	9,336	169	18.1	208	-39	2	1	1	1
Bureau County.....	42,644	772	18.1	951	-178	18	13	9	5
Calhoun County.....	8,245	188	22.8	184	+4	9	2	1	1
Carroll County.....	19,412	222	11.4	433	-211	4	4	7	1
Cass County.....	17,923	367	20.5	400	-33	6	5	7	3
Champaign County.....	57,223	1,134	19.8	1,276	-142	24	12	12	16
Champaign.....	16,051	291	18.1	358	-67	7	4	2	4
Urbana.....	10,347	(4)	(4)	(4)	(4)	8	2	2	2
Christian County.....	38,657	783	20.3	862	-79	14	9	7	3
Clark County.....	21,165	414	19.6	472	-58	9	4	2	2
Clay County.....	17,684	372	21.0	394	-22	8	4	2	2
Clinton County.....	22,953	561	24.4	512	+49	6	3	8	3
Coles County.....	35,138	788	22.4	784	+4	18	12	12	4
Mattoon.....	15,680	324	23.7	305	+19	5	4	4	3
Cook County.....	3,086,379	56,227	18.2	68,826	-12,599	847	1,027	(8)	(8)
Chicago.....	2,728,392	50,303	18.4	60,041	-10,538	764	925	(8)	(8)
Chicago Heights.....	19,917	473	23.7	444	+29	7	15	18	3
Cicero.....	46,563	621	13.3	1,038	-417	8	16	10	9
Elgin.....	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Evanston.....	37,895	990	25.4	844	+146	13	15	5	4
Maywood.....	22,890	(4)	(4)	(4)	(4)	2	2	2	2
Oak Park Village.....	40,909	1,198	29.3	912	+286	23	16	8	8
Blue Island.....	11,598	(4)	(4)	(4)	(4)	2	4	3	5
Berwyn.....	14,678	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Crawford County.....	22,771	400	17.6	506	-106	7	9	5	5
Cumberland County.....	12,858	286	22.2	287	-1	6	3	4	1
DeKalb County.....	31,339	627	20.0	699	-72	7	7	7	4
DeKalb.....	7,871	(4)	(4)	(4)	(4)	2	2	6	1
DeWitt.....	19,270	438	22.7	430	+8	6	4	10	1
Douglas County.....	19,611	422	21.5	437	-15	4	5	5	1
DuPage County.....	42,567	453	10.6	949	-496	7	8	8	2
Edgar County.....	25,769	501	19.4	575	-74	10	9	11	1
Edwards County.....	9,431	166	17.6	210	-44	3	2	3	1
Effingham County.....	19,556	355	18.2	436	-91	6	7	5	4
Fayette County.....	26,187	498	19.0	584	-86	13	8	10	4
Ford County.....	16,466	331	20.1	367	-36	6	4	4	1
Franklin County.....	58,908	749	12.7	1,314	-665	26	25	21	17
Fulton County.....	48,163	909	18.9	1,074	-165	10	6	16	3
Gaston.....	10,952	229	20.9	244	-15	4	4	4	1
Gallatin County.....	12,856	241	18.7	287	-46	3	1	4	1
Greene County.....	22,910	484	21.1	510	-26	9	5	9	4
Grundy County.....	18,580	299	16.1	414	-115	6	4	4	2
Hamilton County.....	15,920	240	15.1	355	-115	3	3	3	1
Hancock County.....	28,523	467	16.4	636	-169	3	2	4	6
Hardin County.....	7,560	161	21.3	169	-8	1	1	1	1
Henderson County.....	9,772	175	17.9	218	-43	4	3	3	2
Henry County.....	45,336	832	18.4	1,011	-179	24	7	7	3
Kewanee.....	16,372	(4)	(4)	(4)	(4)	15	6	2	2
Iroquois County.....	34,841	781	22.4	777	+4	15	10	4	8
Jackson County.....	37,191	814	21.9	820	-15	21	10	17	7
Murphysboro.....	10,869	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Jasper County.....	16,064	339	21.1	358	-19	5	3	2	2
Jefferson County.....	28,480	513	18.0	635	-122	7	5	12	3
Mt. Vernon.....	9,909	(4)	(4)	(4)	(4)	5	2	4	1

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 199. PRINT DATE _____
 200. PRINT SIGNATURE _____
 201. PRINT NAME _____
 202. PRINT ADDRESS _____
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 209. PRINT NAME _____
 210. PRINT ADDRESS _____
 211. PRINT CITY _____
 212. PRINT STATE _____
 213. PRINT ZIP _____
 214. PRINT PHONE _____
 215. PRINT DATE _____
 216. PRINT SIGNATURE _____
 217. PRINT NAME _____
 218. PRINT ADDRESS _____
 219. PRINT CITY _____
 220. PRINT STATE _____

[illegible]

TABLE 10A—POPULATION, REPORTED BIRTHS WITH BIRTH RATES PER 1,000 POPULATION OF 22.3—BIRTH RATE FOR FEDERAL REGISTRATION AREA, YEAR OF 1919, WITH DEATHS OF INFANTS UNDER 1 YEAR OF AGE, WITH DEATH RATES PER 1,000 WITH ESTIMATED INFANT MORTALITY RATES BASED ON PROBABLE NUMBER BIRTHS ACTUALLY REPORTED AND BIRTH RATES ESTIMATED FOR TOTAL POPULATION OR OVER. CALENDAR YEAR OF 1920.

Area.	1	2	3	4	5	6			
	Estimated (revised) population as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Probable number of births based on rate of 22.3.	Probable deficiencies or excesses in reports.	Deaths of infants under 1 year of age (exclusive of stillbirths).			
						Less than 1 day.	Less than 1 week.	Less than 1 month.	1 month.
Adams County.....	62,188	1,116	17.9	1,387	-271	12	16	4	9
Quincy.....	35,978	701	19.5	808	-101	9	14	4	7
Alexander County.....	24,044	414	17.2	536	-122	9	8	5	3
Cairo.....	15,237	235	15.3	340	-107	4	6	4	1
Bond County.....	16,045	273	17.0	358	-85	1	2	4	1
Boone County.....	15,322	247	16.1	342	-95	6	8	1	2
Brown County.....	9,336	169	18.1	208	-39	2	1	1	1
Bureau County.....	42,648	772	18.1	951	-178	18	13	9	5
Calhoun County.....	8,245	188	22.8	184	+4	9	2	1	1
Carroll County.....	19,412	223	11.4	433	-211	4	4	7	1
Cass County.....	17,923	367	20.5	400	-33	6	6	7	3
Champaign County.....	57,223	1,134	19.8	1,276	-142	24	12	12	16
Champaign.....	16,051	291	18.1	358	-67	7	4	2	4
Urbana.....	10,347	(4)	(4)	(4)	(4)	8	2	2	2
Christian County.....	38,657	783	20.3	862	-79	14	9	7	3
Clark County.....	21,165	414	19.6	472	-58	9	4	2	2
Clay County.....	17,684	372	21.0	394	-22	8	4	2	2
Clinton County.....	22,953	561	24.4	512	+49	6	3	8	3
Colles County.....	35,138	788	22.4	784	+4	18	12	12	4
Mattoon.....	15,680	324	23.7	305	+19	5	4	4	3
Cook County.....	3,086,379	56,227	18.2	68,826	-12,599	847	1,027	(6)	(6)
Chicago.....	2,728,308	50,303	18.4	60,041	-10,538	764	925	(6)	(6)
Chicago Heights.....	19,917	473	23.7	444	+29	7	15	12	3
Cicero.....	46,663	621	13.3	1,038	-417	8	16	10	9
Elgin.....	(5)	(5)	(4)	(5)	(5)	(5)	(5)	(5)	(5)
Evanston.....	37,865	960	25.4	844	+116	13	13	5	4
Maywood.....	22,880	(4)	(4)	(4)	(4)	2	2	2	2
Oak Park Village.....	40,909	1,188	29.3	913	+280	23	16	8	8
Blue Island.....	11,698	(4)	(4)	(4)	(4)	2	4	3	5
Berwyn.....	14,578	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Crawford County.....	22,771	400	17.6	506	-108	7	9	5	5
Cumberland County.....	12,858	286	22.2	287	-1	6	3	4	1
DeKalb County.....	31,339	627	20.0	699	-72	7	7	7	4
DeKalb.....	7,871	(4)	(4)	(4)	(4)	2	2	6	1
DeWitt.....	19,270	438	22.7	430	+8	6	4	10	1
Douglas County.....	19,611	422	21.5	437	-15	4	5	5	1
DuPage County.....	42,587	453	10.6	949	-496	7	8	8	2
Edgar County.....	25,769	501	19.4	575	-74	10	9	11	1
Edwards County.....	9,431	166	17.6	210	-44	3	2	3	1
Effingham County.....	19,556	355	18.2	436	-81	6	7	5	1
Fayette County.....	26,187	496	19.0	584	-88	13	8	10	4
Ford County.....	16,466	331	20.1	367	-36	6	4	4	1
Franklin County.....	58,908	749	12.7	1,314	-565	26	25	21	17
Fulton County.....	48,163	909	18.9	1,074	-165	10	6	16	3
Canton.....	10,822	229	20.9	244	-15	4	4	4	1
Gallatin County.....	12,856	241	18.7	267	-26	3	1	4	1
Greene County.....	22,910	484	21.1	510	-26	9	5	9	4
Grundy County.....	18,580	299	16.1	414	-115	6	4	4	2
Hamilton County.....	15,920	240	15.1	355	-115	3	3	3	1
Hancock County.....	28,823	467	16.4	636	-169	3	2	4	6
Hardin County.....	7,660	161	21.3	169	-8	4	3	1	1
Henderson County.....	9,772	175	17.9	218	-43	4	3	2	2
Henry County.....	45,338	832	18.4	1,011	-179	24	7	7	3
Keosauqua.....	16,378	(4)	(4)	(4)	(4)	16	6	2	2
Iroquois County.....	34,841	781	22.4	777	+4	15	10	4	8
Jackson County.....	37,191	814	21.9	829	-15	21	10	17	7
Murphysboro.....	10,889	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Jasper County.....	16,064	339	21.1	358	-19	5	3	2	2
Jefferson County.....	28,480	513	18.0	635	-122	7	5	12	3
Mt. Vernon.....	9,909	(4)	(4)	(4)	(4)	6	2	4	1

TION; PROBABLE NUMBER OF BIRTHS ACTUALLY OCCURRING (BASED ON RATE CONSEQUENT PROBABLE DEFICIENCIES (OR PROBABLE HIGH BIRTH RATES.) ALSO REPORTED LIVE BIRTHS (RESULTANT INFANT MORTALITY RATES) TOGETHER OF BIRTHS OCCURRING. AND DIFFERENCE BETWEEN BIRTH RATES AS SHOWN BY CHILDREN PROBABLY BORN IN ILLINOIS. BY COUNTIES, AND CITIES OF 10,000

6					7	8	9
Deaths of infants under 1 year of age (exclusive of stillbirths).					Death of infants under 1 year of age per 1,000 reported live births (re- sultant infant mortality rate).	Estimated infant mor- tality rate (based on probable number of births occurring).	Difference between resultant and estimated infant mortality rates.
2 months.	3-5 months.	6-8 months.	9-11 months.	Total deaths under 1 year of age.			
6	9	6	8	70	62.7	50.5	12.2
8	4	5	3	49	69.9	61.1	8.8
6	9	4	8	52	125.6	97.0	28.6
9	5	1	1	25	107.3	75.5	31.8
3	2	2	4	16	55.6	44.7	13.9
2	2	1	2	24	97.2	70.2	27.0
3	8	1	5	9	53.3	43.3	10.0
3	2	5	3	66	85.5	69.4	16.1
1	2	1	3	18	95.7	(*)	(*)
1	4	1	2	24	108.1	55.4	52.7
1	2	4	2	30	81.7	75.0	6.7
4	14	9	5	96	84.7	75.2	9.5
1	7	1	4	38	110.0	89.4	20.6
2	1	1	6	16	(*)	(*)	(*)
1	8	1	3	57	72.8	66.1	6.7
1	4	1	3	24	58.0	50.8	7.2
3	1	5	2	27	72.6	68.5	4.1
3	11	4	5	43	87.6	(*)	(*)
1	8	6	4	65	82.5	(*)	(*)
2	2	2	3	23	87.0	(*)	(*)
(*)	(B) 2,807	(7)	(D) 1,484	6,205	110.4	90.2	20.2
(*)	(B) 2,807	(7)	(D) 1,578	5,674	118.8	88.5	19.5
9	6	10	5	67	141.6	72.3	148.5
4	10	8	10	76	180.8	(*)	(*)
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
8	18	9	5	61	83.5	(*)	(*)
1	3	4	2	6	(*)	(*)	(*)
9	3	3	3	66	84.3	(*)	(*)
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
1	1	5	1	33	82.5	65.0	17.5
2	1	2	1	20	69.9	69.7	0.2
1	2	3	3	31	49.4	44.3	5.1
1	5	3	3	14	(*)	(*)	(*)
2	5	3	3	34	87.6	(*)	(*)
2	6	5	1	27	64.0	61.8	2.2
6	6	4	2	39	86.1	41.1	45.0
2	2	1	3	37	73.9	64.3	9.6
4	3	5	1	17	102.4	81.0	21.4
4	1	4	4	32	90.1	73.4	16.7
3	7	7	3	55	110.4	94.2	16.2
13	3	3	4	25	108.2	68.1	40.1
1	29	19	23	173	231.0	131.6	99.4
1	14	5	10	65	71.5	60.5	11.0
2	5	3	3	17	74.2	69.7	4.5
2	1	3	6	19	78.8	66.2	12.6
2	1	4	1	35	72.3	68.6	3.7
2	6	2	2	28	93.6	67.6	26.0
3	2	3	2	20	83.3	56.3	27.0
1	5	3	5	29	62.1	45.6	16.5
1	2	1	2	6	37.3	35.5	1.8
1	2	1	2	19	108.6	87.2	21.4
6	7	4	6	64	76.9	63.3	13.6
8	3	3	2	35	(*)	(*)	(*)
1	3	4	1	46	88.9	(*)	(*)
(*)	16	10	4	88	108.1	106.2	1.9
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
2	2	1	1	15	44.2	41.9	2.3
9	9	12	10	60	117.0	94.5	22.5
4	4	5	4	24	(*)	(*)	(*)

TABLE 10A

Area.	1	2	3	4	5	6			
	Estimated (revised) population as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Probable number of births based on rate of 22.3.	Probable deficiencies or excesses in reports.	Deaths of infants under 1 year of age (exclusive of stillbirths).			
						Less than 1 day.	Less than 1 week.	Less than 1 month.	1 month.
Jersey County.....	12,682	274	21.6	283	-9	7	3	2	-----
JoDavies County.....	21,917	385	17.6	489	-104	12	4	5	6
Johnson County.....	12,022	119	9.9	268	-149	-----	1	1	1
Kane County.....	99,892	1,779	17.8	2,228	-449	25	31	18	8
Aurora.....	36,739	827	22.5	819	+8	10	14	6	1
Elgin.....	27,538	472	17.1	614	-142	7	11	7	1
Kankakee County.....	45,156	774	17.1	1,007	-233	12	7	12	5
Kankakee.....	16,896	347	20.6	377	-30	6	4	6	-----
Kendall County.....	10,074	179	17.8	225	-46	3	2	2	-----
Knox County.....	46,756	839	17.9	1,043	-204	10	20	7	8
Galesburg.....	23,324	603	21.0	534	-81	6	12	7	7
Lake County.....	75,275	1,269	16.9	1,679	-410	17	16	25	5
Waukegan.....	18,389	389	20.0	433	-53	6	6	8	2
LaSalle County.....	93,069	1,690	18.2	2,075	-385	28	28	27	10
LaSalle.....	13,123	351	26.7	293	+68	5	9	8	1
Ottawa.....	10,822	(4)	(4)	(4)	(4)	1	1	3	1
Sireator.....	14,806	345	23.3	330	+15	5	3	4	3
Lawrence County.....	21,380	424	19.8	477	-53	10	3	3	5
Lee County.....	28,017	447	16.0	625	-178	9	5	7	4
Livingston County.....	39,079	793	20.3	271	-78	4	15	3	3
Logan County.....	29,562	511	17.3	659	-148	9	8	5	4
Lincoln.....	11,933	193	16.2	266	-73	4	6	2	3
Macon County.....	65,741	1,459	22.2	1,466	-7	20	19	6	9
Decatur.....	44,471	1,089	24.5	992	+97	16	14	4	6
Macoupin County.....	57,613	1,241	21.5	1,285	-44	15	12	16	5
Madison County.....	107,773	2,239	20.8	2,403	-164	46	35	25	19
Alton.....	25,060	583	23.3	549	+34	11	3	5	5
Granite City.....	15,007	295	19.7	335	-40	8	7	4	3
Marion County.....	37,621	797	21.2	839	-42	16	11	11	9
Centralia.....	19,639	(4)	(4)	(4)	(4)	8	5	2	3
Marshall County.....	14,760	264	17.9	339	-65	7	4	6	-----
Mason County.....	16,634	299	18.0	371	-72	3	-----	2	1
Massac County.....	13,559	255	18.9	302	-46	3	1	6	3
McDonough County.....	27,084	523	19.3	604	-81	11	8	4	6
McHenry County.....	33,198	527	15.9	740	-213	7	5	4	5
McLean County.....	70,215	1,261	18.0	1,566	-305	27	13	10	5
Bloomington.....	23,877	448	18.8	644	-196	12	5	4	1
Menard County.....	11,694	240	20.5	261	-21	4	4	1	1
Mercer County.....	18,800	344	18.3	419	-75	5	4	3	2
Monroe County.....	12,839	202	15.7	286	-84	4	3	1	2
Montgomery County.....	41,717	776	18.6	930	-154	13	11	4	7
Morgan County.....	33,867	595	17.7	749	-154	11	9	12	4
Jacksonville.....	15,735	266	16.9	351	-85	4	6	7	1
Moultrie County.....	14,850	295	19.9	351	-36	7	1	4	1
Ogle County.....	26,830	465	17.3	598	-133	9	10	1	3
Peoria County.....	112,300	1,629	14.5	2,504	-875	26	27	30	7
Peoria.....	76,593	1,209	15.8	1,708	-499	22	23	26	7
Perry County.....	22,943	492	21.4	512	-20	11	8	8	6
Piatt County.....	15,714	341	21.7	350	-9	8	3	3	-----
Pike County.....	26,866	455	17.0	599	-143	5	6	9	3
Pope County.....	9,625	90	9.4	215	-125	1	1	1	-----
Pulaski County.....	14,629	225	15.6	333	-106	9	6	8	1
Putnam County.....	7,580	152	20.1	169	-17	1	2	-----	-----
Randolph County.....	29,109	599	20.6	649	-60	14	4	4	1
Richland County.....	14,044	295	21.0	313	-18	5	2	3	-----
Rock Island County.....	93,425	1,763	18.9	2,063	-320	30	21	23	13
Moline.....	31,071	834	26.8	693	+141	6	14	-----	-----
Rock Island.....	35,735	481	13.5	797	-316	13	4	18	3
Saline County.....	38,773	552	14.2	865	-313	13	11	10	11
Sangamon County.....	100,738	1,897	18.8	2,248	-349	31	34	30	11
Springfield.....	59,870	1,166	19.6	1,388	-183	21	22	21	6
Schuyler County.....	13,285	291	21.9	298	-5	6	4	2	1
Scott County.....	9,489	132	13.9	212	-80	5	2	6	1
Shelby County.....	29,601	632	21.4	660	-28	11	6	7	4
Stark County.....	9,693	166	17.1	216	-50	1	1	1	-----

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—Continued.

6					7	8	9
Deaths of infants under 1 year of age (exclusive of stillbirths).					Deaths of infants under 1 year of age per 1,000 reported live births (re- sultant infant mortality rate).	Estimated infant mor- tality rate (based on probable number of births occurring).	Difference between resultant and estimated infant mortality rates.
2 months.	3-5 months.	6-8 months.	9-11 months.	Total deaths under 1 year of age.			
2	2		2	3	17	62.0	60.1
1	2		5	3	39	101.3	79.8
6	20		3	9	9	75.6	33.6
4	19	11	9	128	128	72.0	57.5
2	2	5	6	58	58	70.1	(9)
1	7	3	3	36	36	76.3	68.6
	3	2	7	54	54	69.8	53.6
		1	4	26	26	72.0	66.3
3	7	5	1	9	9	50.3	40.0
2	4	4	5	65	65	77.5	62.3
2	28	9	4	46	46	91.5	86.1
2	4	4	14	116	116	91.4	69.1
8	23	19	9	51	51	127.8	118.1
2	7	10	1	153	153	90.5	73.7
	1	2	1	35	35	99.7	(9)
3	2	3	3	9	9	(4)	(4)
3	6	3	3	35	35	101.4	(9)
2	5	4	2	36	36	84.9	75.5
6	8	4	1	38	38	85.1	63.8
2	4	4	4	44	44	55.5	50.5
1	2	2	4	40	40	78.3	60.1
4	18	9	3	23	23	119.2	86.5
11	15	8	4	89	89	61.0	60.7
9	36	29	15	71	71	85.2	(9)
1	11	6	6	92	92	74.1	71.6
1	7	6	1	214	214	95.6	89.1
6	16	8	4	47	47	80.6	(9)
2	3	1	2	36	36	122.0	107.5
	2	1	2	81	81	101.6	96.5
		1	2	26	26	(4)	(4)
1	2	1	3	20	20	75.8	60.8
4	7	3	2	13	13	43.5	35.0
	2	2	1	29	29	113.3	96.0
5	10	3	8	35	35	66.9	57.9
4	12	5	7	47	47	89.2	63.5
2	8	1	3	83	83	65.8	53.0
		1	3	36	36	80.4	66.9
	2		4	11	11	45.8	42.1
		2	7	20	20	58.1	47.7
4	7	7	7	12	12	59.4	42.0
1	5	6	5	60	60	77.3	64.5
	4	3	4	54	54	90.8	72.1
4	1	5	1	29	29	109.0	82.6
4	5		3	24	24	81.4	72.5
10	29	24	9	35	35	75.3	58.5
6	24	18	8	162	162	99.4	64.7
4	8	6	5	134	134	110.8	78.5
2	3	1	1	56	56	113.8	109.4
1	6	2	5	21	21	61.6	60.0
1	4	1	1	37	37	81.1	61.8
2	7	5	3	10	10	111.1	46.5
	1	1	1	41	41	179.8	123.1
3	4	2	4	6	6	39.5	35.5
1	1	2	3	36	36	60.1	55.5
11	17	13	12	17	17	57.6	54.3
3	6	2	3	140	140	79.4	67.2
5	7	6	4	37	37	44.4	(9)
1	7	12	13	62	62	122.5	77.8
13	21	19	8	78	78	141.3	90.2
7	19	15	5	167	167	88.0	74.4
	3	2	2	108	108	92.7	81.3
	1	2	1	20	20	68.7	67.6
4	5	6	3	18	18	136.4	84.9
1	1	1		46	46	72.8	69.7
				6	6	36.1	27.8

TABLE 10A

Area.	1	2	3	4	5	6			
	Esti- mated (revised) popu- lation as of July 1, (mid- year).	Re- ported births.	Birth rate per 1,000 popu- lation.	Prob- able number of births based on rate of 22.3.	Prob- able defi- ciencies or excesses in reports.	Deaths of infants under 1 year of age (exclusive of stillbirths).			
						Less than 1 day.	Less than 1 week.	Less than 1 month.	1 month
St. Clair County.....	137,376	2,568	18.7	3,063	-495	33	45	27	26
Bellefonte.....	26,014	479	19.1	558	-79	6	11	-----	6
E. St. Louis.....	67,190	1,374	20.4	1,498	-124	23	23	18	11
Stephenson County.....	37,790	674	17.8	843	-169	12	6	5	4
Freeport.....	19,829	427	21.6	448	-15	6	5	3	4
Tazewell County.....	38,772	777	20.0	865	-88	13	15	8	2
Pekin.....	12,189	(4)	(4)	(4)	(4)	5	7	3	1
Union County.....	20,249	414	20.0	452	-38	7	9	4	3
Vermilion County.....	86,583	1,684	19.4	1,931	-247	38	25	18	3
Danville.....	34,080	771	22.6	760	+11	20	17	8	3
Wabash County.....	14,034	309	22.0	313	-4	8	5	3	1
Warren County.....	21,488	394	18.3	479	-85	6	5	5	2
Monmouth.....	8,116	(4)	(4)	(4)	(4)	4	2	2	-----
Washington County.....	18,035	329	18.2	402	-73	3	5	5	1
Wayne County.....	22,772	360	15.8	508	-148	7	2	9	6
White County.....	20,081	384	19.1	448	-64	7	3	6	4
Whiteside County.....	36,260	712	19.6	809	-97	15	14	12	8
Will County.....	93,251	1,632	17.5	2,082	-450	28	35	25	14
Joliet.....	38,636	668	14.7	862	-294	13	16	16	8
Williamson County.....	61,916	1,307	21.1	1,381	-74	34	18	18	11
Herrin.....	11,198	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Winnebago County.....	92,360	1,821	19.7	2,060	-239	25	28	19	10
Rockford.....	66,694	1,518	22.8	1,437	+31	24	23	16	10
Woodford County.....	19,340	486	25.1	341	+55	3	5	17	1
Total State.....	6,528,886	120,360	18.4	145,594	-25,234	1,974	1,932	(*)	(*)
Down State.....	3,800,584	70,067	18.4	84,753	-14,696	1,210	1,007	890	479
Chicago City.....	2,728,302	50,293	18.4	60,841	-10,538	764	925	(*)	(*)

¹ Birth rate U. S. Bureau of the Census Registration Area, 1919.

² Derived from columns 4 and 6.

³ Minus signs show deficiencies. Plus signs show excesses (columns 2 and 4 compared).

⁴ Not available. Reported births included in county total.

⁵ See Elgin, Kane County.

⁶ Not available for all cities in Cook County for these age groups. Deaths for these age groups included in total at (B).

⁷ Not available for all cities in Cook County for this age group. Deaths for this age included in total at (D).

⁸ Probably true rate.

⁹ See column 7.

DIVISION OF VITAL STATISTICS.

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—Concluded.

6					7	8	9
Deaths of infants under 1 year of age (exclusive of stillbirths).					Deaths of infants under 1 year of age per 1,000 reported live births (re- sultant infant mortality rate).	Estimated infant mor- tality rate (based on probable number of births occurring).	Difference between resultant and estimated infant mortality rates.
2 months.	3-5 months.	6-8 months.	9-11 months.	Total deaths under 1 year of age.			
16	39	32	23	242	94.2	79.0	14.8
1	2	2	3	31	64.7	66.6	2.1
10	27	27	18	187	114.5	104.8	9.5
1	10	7	3	48	71.2	66.9	14.3
1	8	4	2	33	77.8	74.7	2.8
3	7	1	6	55	70.8	63.6	7.2
2	5	1	1	33	(4)	(4)	(4)
1	6	1	3	34	82.1	75.2	6.9
9	18	16	25	157	93.2	81.3	11.9
2	4	9	7	70	90.8	(9)	(9)
3	8	2	1	81	100.2	99.0	1.2
4	3	—	1	26	66.0	54.3	11.7
1	2	—	1	12	(4)	(4)	(4)
1	7	2	1	25	76.0	62.2	13.8
1	6	3	6	40	111.1	78.7	32.4
2	9	5	5	41	106.8	91.5	15.3
2	11	10	7	79	111.0	97.7	13.3
8	22	15	12	159	97.4	76.4	21.0
5	10	8	6	81	142.6	94.0	48.6
7	19	19	15	141	107.9	102.1	5.8
(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
15	23	9	11	140	76.9	68.0	8.9
12	17	7	11	119	87.4	(9)	(9)
—	—	1	2	29	89.7	(9)	(9)
(4)	(B) 5,186	(7)	(D) 2,526	11,618	96.5	79.8	16.7
353	867	616	532	5,944	84.8	70.1	14.7
(9)	(B) 2,607	(7)	(D) 1,378	5,674	118.8	93.3	19.5

TABLE 11—PROBABLE DEGREE OF COMPLETENESS OF BIRTH AND DEATH REGISTRATION IN ILLINOIS, CALENDAR YEARS OF 1919 AND 1920 BASED ON BIRTH RATE OF 22.3 (RATE REPORTED FOR FEDERAL REGISTRATION AREA FOR BIRTHS, BUREAU OF THE CENSUS, 5TH ANNUAL REPORT 1919) AND DEATH RATE OF 12.9 (RATE REPORTED FOR FEDERAL REGISTRATION AREA FOR DEATHS, BUREAU OF THE CENSUS MORTALITY STATISTICS, 1919).

Area.	1919				Area.	1920			
	Population estimated (revised) mid-year (July 1).	Probable number.	Actually reported.	Probable degree of completeness.		Population estimated (revised) mid-year (July 1).	Probable number.	Actually reported.	Probable degree of completeness.
The State.....	6,441,674	Births 143,649 Deaths 83,096	110,770 77,528	.77 .93	The State.....	6,528,886	Births 145,594 Deaths 84,223	120,360 82,132	.83 .98
Chicago.....	2,675,108	Births 59,655 Deaths 34,509	44,061 33,494	.73 .97	Chicago.....	2,728,302	Births 60,841 Deaths 35,195	50,303 34,841	.83 .99
State exclusive of Chicago.....	3,766,566	Births 83,994 Deaths 48,589	66,719 44,034	.79 .91	State exclusive of Chicago.....	3,800,584	Births 84,753 Deaths 49,028	70,057 47,291	.83 .96

TABLE 12—PROBABLE DEFICIENCIES IN THE NUMBER OF BIRTHS REPORTED, FOR THE YEARS OF 1919 AND 1920, FROM THE STATE, CITY OF CHICAGO AND STATE EXCLUSIVE OF CHICAGO.

Area.	Births—1919.				Births—1920.						
	1919	Estimated (revised) population mid-year (July 1).	Actually reported.	Rate per 1,000.	Based on birth rate of 22.3 per 1,000 population. (Federal Registration Area Bureau of the Census Birth Statistics, 8th Annual Report, 1919).	1920	Area.	Estimated (revised) population mid-year (July 1).	Actually reported.	Rate per 1,000.	Based on birth rate of 22.3 per 1,000 population. (Federal Registration Area Bureau of the Census Birth Statistics, 8th Annual Report, 1919).

DIVISION OF CHILD HYGIENE AND PUBLIC HEALTH NURSING.

C. W. EAST, M. D., *Chief.*

It should be noted that the Division of Child Hygiene and Public Health Nursing has not had its full personnel. The position of supervising nurse has been vacant during the entire year. We have had but two public health nurses.

CLINICAL SERVICE.

The care of our reconstruction clinics has increased by reason of demands for new clinics and the larger number of patients attending them.

Clinics have been added at Jacksonville and Mattoon, and occasional service has been given at Carlinville. Litchfield and Kewanee have applied for the establishment of clinics. There are now twenty-five clinics on the list of the division. The accompanying table presents in detail the work done during the year. (See Table No. 13.)

It will be seen that several new features appear when compared to previous years. Over twenty-seven hundred patients were cared for, as compared to about fifteen hundred the previous year.

The St. John's Sanitarium, near Riverton, Sangamon County, opened a crippled children's unit in April, 1921, especially for those who need operative and institutional care. In it there are accommodations for forty patients. There has been an average of thirty patients since the opening of this institution. The sanitarium cares for these patients at a per capita cost of \$8 per week. The chief of the Division of Child Hygiene and Public Health Nursing is physician and surgeon in charge, and the cooperative plan begun and developed in our field clinics is continued. The Sangamon County Board of Supervisors and the Bissell school district, in which the institution is located, have opened a public school at the sanitarium where the crippled children have advantages which many of them could not have at home.

Reference to the chart will show that other problems are being met through the twenty-five clinics, besides those of the crippled. An important percentage of the patients present nutritional faults. Others show pathological conditions of wide distribution, not excluding psychopathic and nervous abnormalities. In fact, we believe that these clinics are among the best possible agencies to introduce the entire range of public health interests to the communities of the State. Public health interests helped by them may be enumerated as follows:

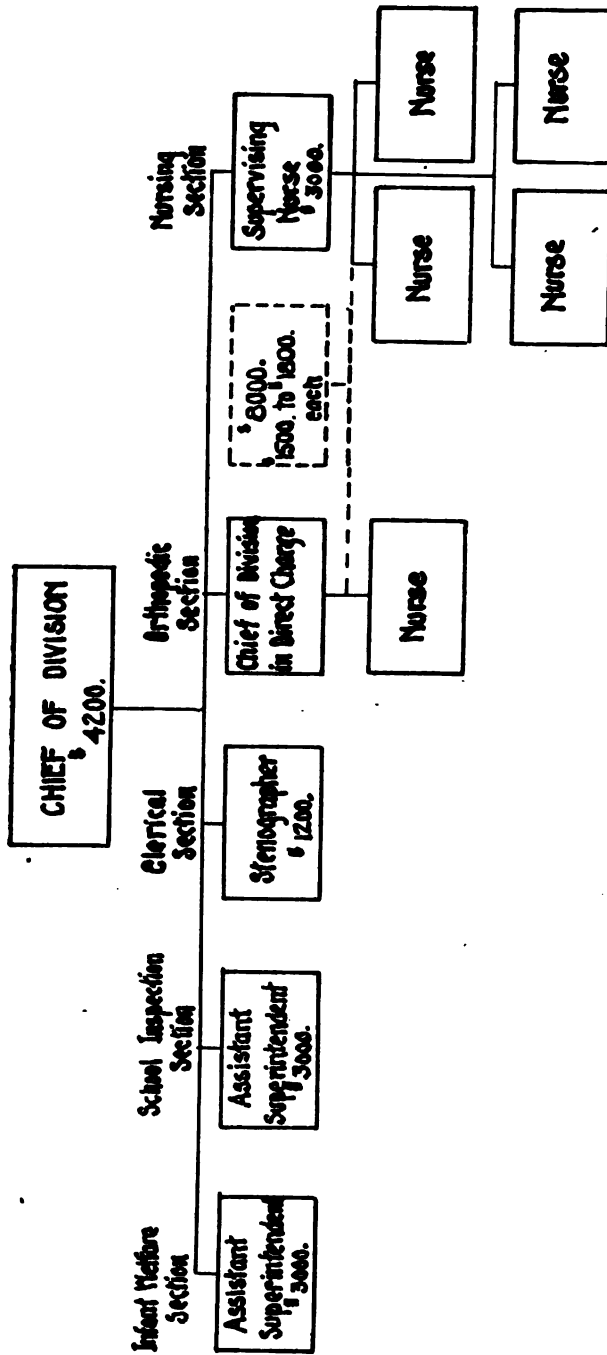


Figure XXI—Divisional Organization for Biennium, 1921-23.

1. They meet adequately the needs of the crippled, especially among the indigent.
2. They furnish help to physicians who cannot take their crippled patients to the centers for orthopedic consultation.
3. They stimulate public health nursing.
4. They broaden the vision and functions of local public health administration.
5. They employ extra-governmental agencies interested in public health in a mutually helpful way.
6. They afford opportunity for observation, advice, assistance and unobtrusive but effective supervision of local public health agencies.
7. They pave the way for public school nursing and medical inspection.
8. They make a point of contact with the public which accrues to the benefit of public health in all its agencies.
9. They assist in numerous cases to call favorable attention and support to other public health efforts such as anti-tuberculosis and social hygiene.
10. They are a standing advertisement of the State Department of Public Health and have widely commended it to favor.

This enumeration is not complete and is not made as an apology, which is needed in no sense, and to no extent, but as correctly a report of one of the principal activities of the division.

EDUCATIONAL SERVICE.

No small amount of service has been rendered public health propaganda by the division. All members have taken part in numerous better babies conferences, including that of the State Fair. The activities of the division in this respect have reached from Lake to Jackson Counties, and from Danville to Aledo and Carthage. The nurses have visited numerous communities for conference and advice with local nursing agencies.

In various instances a member of the nursing staff of the division has inducted a new nurse into her duties. This has been especially true in school nursing, the forces of which are recruited largely from private duty ranks.

The division has been responsible for numerous articles in the department publications and the production of several important pamphlets.

Addresses and lectures have been given in every part of the State during the year to groups representing a wide range of professional and civic constituency.

The correspondence of the division is considerable and important. Recognition has come in the way of inquiries and requests for service from every part of the State. The Children's Bureau of the United States Department of Labor has frequently shown interest in plans of the division, and has specifically commended its work.

The relationship of the division to the central division of the American Red Cross, the Chicago Health Department, the Cook County Bureau of Social Service, the Chicago Visiting Nurses Association, the Illinois Tuberculosis Association and the King's Daughters has been cordial, and with the most of these more than casual.

The Shriners, the International Rotary Association, various local units of the Traveling Men's Protective Association and the Union Commercial Traveler's Association have manifested deep and helpful interest.

The division is reaching the public widely and effectively. As this report is closed it has become evident that the legislature has provided adequately for desired increases in personnel and its compensation. This but meets demands which the service has created. The organization chart, which is included in this report, presents graphically the service which the division is now prepared to render. This organization will become effective July 1, 1921.

We record our gratitude and our purpose to enlarge and enhance our service to the State correspondingly.

TABLE 13.

	Number cases in attendance.	Number old cases.	Number new cases.	Number infantile paralysis.	Number tuberculosis.	Number malnutrition.	Number spastic paralysis.	Other orthopedic conditions.	Special and assisted training.	Number given advice as to shoes, braces, casts or other appliances.	Referred to family physician.	Wassermann test.	Number X-ray.	Number operations advised.	Number operated by us.	Number operated by others.	Advised hospital or institutional care.
Alton.....	208	157	51	9	6	22	3	35	29	36	9	7	4	18	1	3	4
Aurora.....	51	34	17	7	1	3	1	6	14	18	1	1	3	1	1	1	1
Blue Island.....	38	10	28	9	1	5	1	10	7	13	1	1	2	5	4	1	3
Carlinville.....	9	9	9	4	1	1	1	4	4	3	1	1	3	4	1	1	3
Champaign.....	86	25	61	19	6	11	3	53	23	59	8	5	6	13	5	7	7
Cicero.....	65	38	27	19	1	2	3	12	18	30	2	2	2	5	5	2	2
Danville.....	196	126	70	48	8	10	5	44	33	82	13	11	11	15	15	7	7
Elgin.....	79	40	39	9	4	5	2	21	24	22	4	2	3	1	7	1	4
East St. Louis.....	61	25	36	26	1	5	3	18	14	30	5	1	1	7	1	1	6
Freeport.....	135	81	54	20	3	7	1	41	24	58	6	3	5	10	10	2	2
Galesburg.....	131	55	76	26	1	12	3	44	45	52	5	1	6	25	3	3	4
Jacksonville.....	23	12	11	5	1	1	1	6	3	5	1	1	1	2	2	2	3
Johet.....	132	80	52	17	4	7	4	27	22	54	8	6	6	6	6	12	2
Kankakee.....	86	54	32	13	3	3	2	22	10	38	3	1	4	4	4	2	2
Moline.....	73	47	26	9	3	3	1	15	20	29	1	2	2	9	1	6	6
Mt. Olive.....	6	6	6	3	1	1	1	3	1	2	1	1	1	1	1	1	1
Monticello.....	39	30	9	1	1	1	1	6	11	6	3	1	1	1	1	1	1
Mattoon.....	117	45	72	30	5	9	8	35	28	57	10	2	9	13	1	1	10
Ottawa.....	64	43	21	25	1	5	1	12	8	34	1	1	3	3	1	2	2
Princeton.....	146	78	68	20	7	5	1	36	39	46	10	3	8	11	11	11	11
Quincy.....	78	37	41	14	3	8	1	21	12	32	8	1	6	3	6	6	6
Rockford.....	39	18	21	13	1	8	1	8	9	16	3	3	1	4	4	4	4
Rock Island.....	51	39	12	9	1	4	1	7	11	14	1	1	1	4	1	3	3
Streator.....	98	68	30	9	2	7	1	15	16	29	4	3	3	3	1	2	2
Waukegan.....	43	34	9	12	1	2	1	5	10	25	1	1	1	1	1	3	3
Springfield.....	689	521	168	75	35	26	5	71	53	199	12	8	31	20	8	5	40
Total.....	2,743	1,697	1,046	451	95	170	48	577	488	999	115	47	122	185	10	19	138

DIVISION OF DIAGNOSTIC, BIOLOGICAL AND RESEARCH LABORATORIES.

THOMAS G. HULL, Ph. D., *Chief.*

According to the appropriation made by the Fifty-first General Assembly, the laboratories of the department were divided into two distinct divisions, the Diagnostic Laboratories and the Biological and Research Laboratories. For convenience, however, the personnel of both these divisions has been merged into a unit under the general supervision of one chief, as will be seen in the accompanying chart. The Fifty-second General Assembly made provisions for one chief for the two sections of the division.

The principal function of the laboratories during the past year has been the examination of specimens for diagnosis of the communicable diseases. It has been found impracticable to manufacture biological products, so the money appropriated for this purpose was used for the purchase of these products. The rabies fund was used for services of physicians to administer rabies vaccine and did not entail any burden on the laboratory personnel. The clerical and supply sections have acted in the capacity of "service units" for the diagnostic and biological sections, in preparing reports, keeping records and filling requests for material.

LAWS UNDER WHICH THE LABORATORIES OPERATE.

Following are abstracts of the laws, passed by the General Assemblies of the State, which affect the laboratories:

An Act to create and establish a Board of Health in the State of Illinois. Approved May 28, in force July 1, 1877. Laws 1877, p. 207. Amended by act filed May 18, in force July 1, 1907. Laws, 1907, p. 537:

The State Board of Health may establish and maintain a chemical and bacteriologic laboratory for the examination of public water supplies, and for the diagnosis of diphtheria, typhoid fever, tuberculosis, malarial fever and such other diseases as they may deem necessary for the protection of the public health.

An act to provide for the treatment and care of poor persons afflicted with the disease called rabies. Approved May 12, in force July 1, 1905. Laws 1905, p. 38:

The overseers of the poor or other officers having charge of the dispensation of public charity in the several counties of this State may hereafter send to an institution within the State of Illinois for the preventive treatment of hydrophobia, such institution to be selected by the State Board of Health, all poor persons duly certified by regular physicians to have been bitten by rabid animals or otherwise put in danger of infection with rabies.

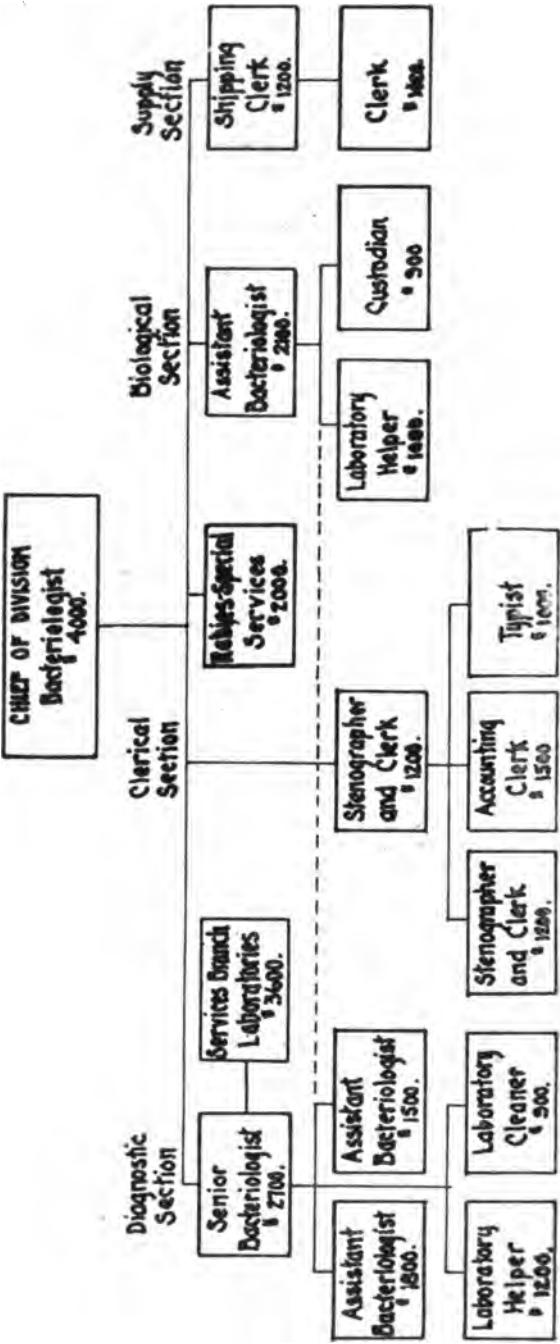


Figure XXII—Divisional Organization for Biennium, 1921-28.

The charges for the services of said institution shall be paid by the State of Illinois at a rate not exceeding one hundred dollars a patient, and there is hereby appropriated the sum of two thousand dollars, or as much thereof as may be necessary to expend, for the purpose of this act.

The Civil Administrative Code (sec. 55, p. 29) gives the Department of Public Health the following powers:

To maintain chemical, bacteriological and biological laboratories, to make examinations of milk, water, sewage, wastes and other substances, and to make such diagnoses of diseases as may be deemed necessary for the protection of the people of the State;

To purchase and distribute free of charge to citizens of the State diphtheria antitoxin, typhoid vaccine, smallpox vaccine and other sera, vaccines and prophylactics such as are of recognized efficiency in the prevention and treatment of communicable diseases;

To make investigations and inquiries with respect to the causes of disease, especially epidemics, and to investigate the causes of mortality and the effect of localities, and other conditions upon the public health, and to make such other sanitary investigations as it may deem necessary for the preservation and improvement of the public health.

DIAGNOSTIC SECTION.

The main laboratories at Springfield made 52,008 examinations during the past year, an increase over the previous year of 65 per cent. It has been necessary to confine the procedures performed quite rigidly to problems with a public health aspect. Tissues sectioning and urine analysis as routine measures have been eliminated. All communicable diseases, however, for which there is a laboratory test have received particular attention. In some instances, as meningitis, very little could be accomplished from a distance, and in the isolated occasions which arose, the emergency did not warrant sending a field laboratory to the spot.

TABLE 14—EXAMINATIONS MADE AT CENTRAL DIAGNOSTIC LABORATORY FOR FISCAL YEAR 1920-1921.

	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Wassermann (blood).....	1,457	1,606	1,466	1,601	1,851	1,817	2,005	2,060	2,287	2,060	2,316	2,752	23,278
Wassermann (spinal fluid).....	11	31	22	21	21	23	45	46	75	70	69	56	490
Complement fixation test for gonorrhea.....	48	67	74	136	152	121	156	155	207	199	232	321	1,868
Complement fixation test for tuberculosis.....	36	41	57	66	102	100	136	112	166	170	171	220	1,376
Blood for malaria.....	25	7	4	13	8	3	2	7	0	8	3	13	93
Diphtheria cultures.....	75	113	793	806	1,442	2,794	739	356	272	137	129	188	7,843
Typhoid (Widal).....	184	173	189	187	181	194	115	117	87	77	113	147	1,764
Paratyphoid (Widal) A.....	184	165	189	187	181	193	115	117	87	77	113	147	1,755
Paratyphoid (Widal) B.....	184	165	189	187	181	193	115	117	87	77	113	147	1,755
Sputum for tuberculosis.....	546	551	572	562	580	660	689	633	677	778	738	643	7,394
Pus for gonorrhea.....	177	167	230	239	310	282	214	201	245	218	255	284	2,522
Feces for typhoid.....	4	54	34	42	28	7	5	12	42	11	20	11	270
Colloidal gold.....	12	0	0	0	0	0	12	17	28	30	27	15	141
Urine—													
Chemical.....	13	11	14	14	4	0	37	54	68	27	23	19	294
Microscopical.....	13	11	14	14	4	0	37	52	68	27	34	21	295
Spinal fluid—													
Chemical.....	3	2	0	0	3	0	11	16	11	27	16	9	98
Microscopical.....	3	1	0	0	3	0	11	16	11	26	18	9	98
Miscellaneous.....	62	19	9	16	18	54	17	45	56	34	16	38	384
Total examinations.....	3,037	3,184	3,856	4,100	5,051	6,339	4,423	4,189	4,429	3,952	4,406	5,040	52,008

In Table 14 is a list by months of examinations made at the main laboratories at Springfield.

The branch laboratories have been of increasing service, but due to a limited appropriation, it has been necessary to confine their efforts to the diagnosis of diphtheria. These branch laboratories could be infinitely more useful if they were put on a salary basis instead of a piece-work basis as now, with the understanding that all diphtheria cultures must be examined, whether for diagnosis, quarantine release or inspection. It would also be advantageous to have branch laboratories at rail centers like Chicago and East St. Louis, for the examination of all specimens submitted. The time consumed in getting back reports on specimens submitted would be infinitely shorter, making the small extra expense well worth while.

In Table 15 is a list of branch laboratories, their location, the bacteriologist in charge and the number of diphtheria examinations made during the last year:

TABLE 15—EXAMINATIONS MADE AT BRANCH LABORATORIES FOR FISCAL YEAR 1920-21.

	Diphtheria examinations.
North Branch, Chicago—(Dr. T. C. Abel, 7 W. Madison).....	2,804
South Branch, Mt. Vernon—(Dr. W. H. Gilmore).....	2,218
Northwest Branch, Moline—(Dr. Maude J. Vollmer, Lutheran Hospital)	1,012
North Central Branch, Ottawa—(Dr. Roswell Pettit, Illinois Valley Laboratory).....	232
East Branch, Urbana—(Dr. F. W. Tanner, Chemistry Building).....	710
West Branch, Galesburg—(Dr. S. G. Winter, Bank of Galesburg Bldg.)	985
Total, 1920-21, all branches.....	7,961
Total, 1919-20, all branches.....	3,412
Total, 1918-19, all branches.....	3,058

The total examinations for all laboratories during the past year was 59,969 as against 37,509 for the year before and 15,061 for the preceding year.

Besides examinations made at the various State laboratories, the department has cooperated with private and municipal laboratories by supplying culture media, thus making it possible to have the work done locally with quicker and better reports. It also took away from the personnel of the State laboratories the strain of examining large numbers of cultures at a time when they were already overcrowded with work. During the year, 4,125 tubes of culture media were distributed, besides mailing containers and supplies.

BIOLOGICAL SECTION.

For several years past, it has been the hope of the Department of Public Health to obtain suitable quarters and sufficient personnel to produce the biological products required for distribution throughout the State. At the present time this practice seems inadvisable and the necessary biologics are being purchased under contract from reputable commercial laboratories. The personnel of the biological laboratory is engaged in diagnostic work, in the checking up of biologics purchased

and in research work. It is hoped that eventually, sufficient help will be obtained in the diagnostic section so that the biological laboratory staff may devote its time to necessary research work and to the care of biologics purchased.

Table 16 shows a list of biologics purchased during the last year with the approximate amount of money paid in each instance:

TABLE 16—BIOLOGICS PURCHASED DURING FISCAL YEAR 1920-21.

Diphtheria antitoxin	\$57,347.58
Triple typhoid vaccine	2,415.79
Silver nitrate	2,130.00
Anti-anthrax serum	292.50
Schick test material	30.76
Total	<u>\$62,216.63</u>

During the coming year toxin-antitoxin (for vaccination against diphtheria) will be added to the list of products named above and will also be distributed without cost to citizens of the State.

The appropriation for biologics is entirely inadequate. During the past year, an emergency appropriation was passed by the Fifty-second General Assembly for \$30,000 to enable the department to finish out the year, the fund for these products having been completely exhausted when the year was half over. The demand for these products is growing constantly, as it should. In no other way can the State save lives with the expenditure of so little money as by furnishing an adequate supply of preventive and curative biologics. Probably the coming year will see the fund entirely exhausted and the distribution of such material temporarily stopped.

SUPPLY SECTION.

The supply section is engaged principally in the distribution of mailing containers for the submission of specimens to the various laboratories. This work is more important than it might seem to a casual observer. It is necessary not only to keep all sections of the State supplied with the various kinds of containers, but to see that all containers sent out are in proper condition. Carelessness in the matter of Wassermann containers might mean many badly infected arms from improperly sterilized needles.

Specimen containers are sent to more than four hundred antitoxin agents throughout the State, to clinics and dispensaries, and to private physicians as requests come in from them. Six different specimen containers are now in use, (1) a sterile test tube for specimens of blood and spinal fluid (sterile bleeding needle included), (2) a vial containing creosol solution for specimens of sputum for tubercle bacilli, (3) a vial containing 30 per cent glycerin for specimens of urine, blood or feces to be cultured for typhoid bacilli, (4) a sterile cotton swab for throat cultures, (5) microslides for pus and blood smears and (6) parchment paper for blood for Widal tests.

In Table 17 is shown the number of mailing containers sent out during the last year.

TABLE 17—MAILING CONTAINERS DISTRIBUTED FROM JULY 1920 TO JUNE, 1921.

For.	Sputum.	Wasser- mann.	Micro- scope slides	Diph- theria.	Widal.	Feces.	Others.	Total.
July.....	737	2,056	380	391	262	207	9	4,062
August.....	1,051	2,036	322	325	189	186	12	4,111
September.....	916	2,601	273	547	264	76	5	4,682
October.....	1,230	2,642	599	2,927	503	51	13	7,965
November.....	913	2,342	546	6,467	288	44	48	10,648
December.....	802	2,504	311	2,830	147	9	45	6,648
January.....	1,622	2,935	907	2,870	438	475	-----	9,258
February.....	877	2,271	422	1,292	165	97	15	5,139
March.....	1,158	3,640	493	683	162	167	6	6,309
April.....	1,151	2,268	352	491	184	148	8	4,602
May.....	918	3,738	629	715	180	61	12	6,253
June.....	794	2,694	490	692	233	79	-----	4,982
Total.....	12,179	31,718	5,724	20,230	3,035	1,600	173	74,659

Total for fiscal year 1920-21.....	74,659
Total for fiscal year 1919-20.....	36,524
Total for fiscal year 1918-19.....	11,009

As will be seen from a comparison between Table 17 and Tables 14 and 15 the number of mailing containers distributed is considerably in excess of the specimens received. While a few containers without doubt find their way to other laboratories, still the discrepancy is mainly accounted for by expansion. The number of containers sent out on the average equals the number of specimens received six months later.

The distribution of biological products which would normally come under the supply section is done by the Division of Communicable Diseases. The latter division formerly handled these products and has all the necessary machinery for this work, therefore, a change is inadvisable.

The distribution of specimen containers in emergencies is a matter requiring special attention. While the various antitoxin agents have a small supply of containers on hand at all times, very often it is necessary to telegraph in for a greater supply in cases of epidemics. Under the present system the field men and district health officers of the department may be delayed for two days in accomplishing a given task while waiting for the supplies to come by mail from Springfield. Distributing stations at rail centers such as Chicago and East St. Louis would save many hours of time in emergencies such as epidemics. These distributing stations could be installed at the branch laboratories at those places.

CLERICAL SECTION.

The function of the clerical section is to report promptly the results of all examinations made in the laboratories, to keep proper records of all examinations made and, in conjunction with the Division of Communicable Diseases, to keep records concerning the distribution of the

biological products. In addition to the above service, duplicate copies of reports have been sent to the Division of Communicable Diseases, the Division of Social Hygiene and to the district health officers.

RABIES SECTION.

The Fifty-first General Assembly appropriated \$4,000 for the biennium for services in treating persons bitten by dogs suspected or proved to be rabid. Of this money, \$2,522 was expended in two years. The present system consists in sending patients unable to pay for treatment to a hospital in Chicago, where the county pays the travel and living expenses and the State pays for the services of administering the anti-rabic vaccine. In such instances an attendant must accompany the patient, entailing double expense for the county besides the inconvenience for all concerned of bringing all such patients to one place. A much more efficient system would be to allow the patients to be treated at home, or in the nearest hospital, the local physician receiving the material for treatments by mail.

RESEARCH.

Among the functions of the Biological and Research Laboratories are the search for improvements in the laboratory diagnosis of the communicable diseases and the study of the manner and spread of diseases. Because of the pressure of other work no great amount of time could be given to research, but, as opportunity has permitted, three different matters have been taken up. The Sachs-Georgi precipitation test for syphilis has been studied carefully and some modifications made which warranted the publication of a paper on the subject (*Journal of Immunology*, Vol. 6, November, 1921, p. 521).

The study of anthrax in shaving brushes resulted from the accidental infection of a man from a newly purchased brush. From fifty-eight brushes examined, thirty-five showed contamination with the anthrax organism. These were all cheap brushes made of horse hair. Of twenty-three higher priced brushes not one showed such contamination.

The study of poliomyelitis in relation to paralyzed animals was undertaken after several instances came to the attention of the department where cases of poliomyelitis developed on farms two or three weeks after certain of the farm animals became paralyzed. The study included chickens, hogs, and horses. The problem was not solved, however, and no definite conclusions drawn from the work done.

EDUCATIONAL WORK.

Every opportunity has been seized to disseminate information concerning the spread and control of the communicable diseases. The division took part with the rest of the department in the exhibits at the State Fair and at the Health Show in Chicago. At various times, the

chief of the division has furnished articles for publication in "Health News" and has filled speaking engagements. From time to time some of the public schools have desired culture media for use in class work and cultures of some of the non-pathogenic bacteria for demonstration purposes. These requests have been filled. Besides nurses and physicians who have spent from a few hours to several weeks in the laboratory for instruction purposes, several classes conducted by the United States Public Health Service for the study of tuberculosis were conducted in the laboratory for the discussion and demonstration of laboratory diagnosis of tuberculosis.

MONETARY VALUE OF WORK OF DIVISION.

Through efficiency in grouping operations and through reduced overhead costs from large volumes of work, the laboratories have been able to cut the cost of making laboratory examinations to a minimum. For instance, a Wassermann test ordinarily costing \$5 is done for less than 40 cents, this including the cost of the mailing container and the stenographer's time and postage for sending the report. The biological products purchased are obtained through competitive bidding far below what an individual must pay. In Table 18 is given a summary of the assets and liabilities of the division.

TABLE 18—ESTIMATED ASSETS AND LIABILITIES OF THE DIVISION OF LABORATORIES FOR THE FISCAL YEAR 1920-21.

Laboratory examinations valued at commercial rates.....	\$212,583.00
Biological products distributed valued at market price.....	296,682.75
Services for rabies vaccine.....	1,261.00
Estimated total assets.....	\$510,526.75
Cost of operating laboratories including salaries.....	\$19,466.04
Cost of biological products purchased.....	62,216.83
Cost of rabies vaccine.....	1,261.00
Total liabilities.....	82,943.67
Profit to State of Illinois.....	\$427,583.08

From this table it will be seen that the laboratories did an estimated amount of almost half a million dollars worth of business with an estimated profit to the State of more than four hundred thousand dollars.

DEVELOPMENT OF LABORATORIES.

It was in 1904 that the Board of Health, with money appropriated for sanitary investigations, secured the services of a bacteriologist and opened a laboratory for the examination of sputum for tubercle bacilli, cultures for diphtheria bacilli, blood for Widal tests and blood for malaria parasites. Since that time the laboratories have occupied quarters in five different locations and been directed by twelve different chiefs. In spite of this fact, they have grown steadily both in scope and value of work,—from 1,425 total examinations in 1905 to 59,969 in the year just passed.

It was about 1914 that the first branch laboratories were opened and in 1919 that the Biological and Research Laboratories were added,

with a fund for procuring biological products. (Biological products were distributed at cost from 1905 to 1909, then distributed free, the money being appropriated from other funds).

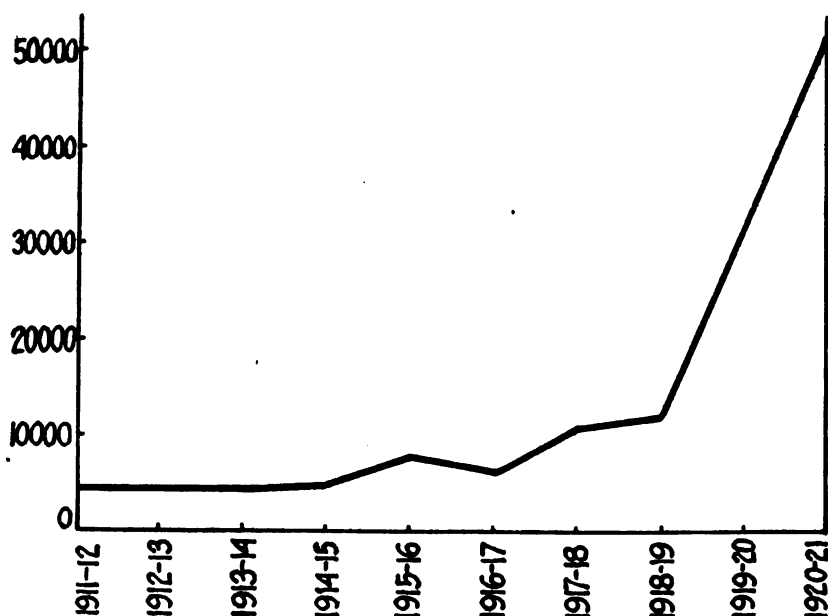


Figure XXIII—Total Examinations Made at Diagnostic Laboratories, 1911-21.

In Table 19, and Figure XXIII, growth of the main laboratory at Springfield, is indicated by the total number of specimens examined in the last ten years:

TABLE 19—TEN YEARS GROWTH OF THE MAIN LABORATORIES.

	Total examinations.		Total examinations.
1911-12.....	4,249	1916-17.....	6,013
1912-13.....	4,442	1917-18.....	10,499
1913-14.....	4,232	1918-19.....	12,003
1914-15.....	4,611	1919-20.....	31,494
1915-16.....	7,579	1920-21.....	52,008

This rapid development is constantly bringing up new problems—quarters, personnel, appropriations, laboratory supplies. The very near future must solve many of them.

FUTURE DEVELOPMENT.

The last two years have seen a very rapid rise in laboratory work. Using as an index the number of mailing containers distributed in excess

of the number of specimens received during the last six months of the year (January to June), an increase of 40 per cent in the number of specimens received may be expected the coming year. The present personnel is adequate to care for this increase but the laboratory quarters are unsuitable. Already part of the laboratory force has been crowded out of the State House into the laboratories five miles north of the city, which were intended for production of biological products. This separation of the laboratory force is most unsatisfactory, as a five mile trip by automobile is required to get from one laboratory to the other and no adequate telephone service exists. Prompt reports in emergency cases are almost impossible to obtain under these circumstances.

Among the objects to be worked for and the problems for solution in the future are the following:

- a. More adequate quarters for the main laboratory so that the force will not have to be divided.
- b. The extension of branch laboratories to cover the State more fully and payment upon a salary basis.
- c. The establishment of branch laboratories at such rail centers as Chicago and East St. Louis, which will be capable of making all examinations, thus affording quicker diagnoses, and relieving the congestion at Springfield.
- d. The establishment of distributing stations for specimen containers at Chicago and East St. Louis.
- e. The relief from diagnostic work of the biological section so that it may indulge in research, and the control of the biological products purchased.
- f. The distribution of rabies vaccine to local physicians, making it unnecessary to send patients bitten by rabid dogs a long distance for treatment.
- g. A better organization of the laboratory service in the department, which service at present is scattered throughout the divisions.
- h. Fuller cooperation with local laboratories, both private and municipal, to insure better laboratory service in the various localities around the State.

DIVISION OF PUBLIC HEALTH INSTRUCTION.

B. K. RICHARDSON, *Chief*.

For a number of years the activities that logically come under the functions of the Division of Public Health Instruction have been accomplished largely through the cooperation of various other divisions. With a complete change in the personnel during the fiscal year ending June 30, 1921, all of these activities have been assumed by the division. This change has resulted in a decided increase in the efficiency of carrying out the regular work and in an extension of the service rendered.

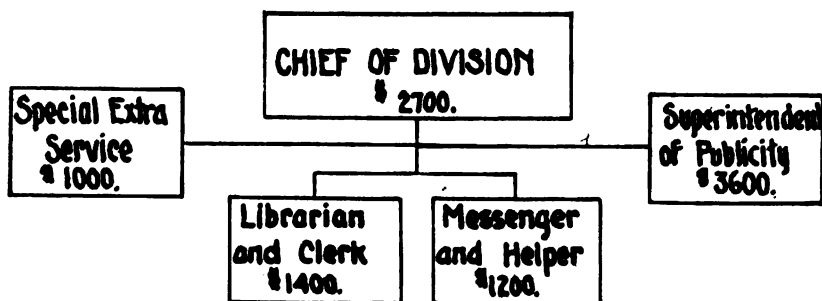


Figure XXIV—Divisional Organization for Biennium, 1921-1923.

Realizing that the ultimate success of public health service depends primarily upon education, every activity of the division has been planned and carried out with the end in view of disseminating in popular form the latest and most scientific thought in reference to the control and prevention of disease and the promotion of health.

Services rendered along these lines are almost purely educational in character and fall naturally into two sections, routine and special. This report is divided under these two headings, with an additional section on recommendations.

ROUTINE.

The most important regular work of the division is the publication of "Health News," the monthly bulletin of the department. Beginning with February, 1921, the bulletin has for the first time since the signing of the Armistice, been issued regularly during the early part of each month. Its style has been changed so that each number carries a symposium on some important and seasonal health subject, together with

discussions and statistical information relative to the prevalence of communicable diseases and the trend of public health administration in the State. The mailing list has been revised so that it now embraces a total of more than 13,000 names that include not only practically all physicians in Illinois, outside of Chicago, but thousands of lay workers as well. Its readers are found in every part of the world and its popularity finds expression through many letters of appreciation and a constantly increasing demand for its wider circulation. Its subject matter has been used freely not only by periodicals of almost every kind, but by the daily press as well.

Besides "Health News" the division issues and distributes special bulletins dealing with particular subjects. During the year 112,000 pamphlets of this kind were printed. They deal with the subjects of sanitation, infant and child care, tuberculosis, scarlet fever and general public health information for school children. In response to specific requests more than 200,000 pieces of literature, consisting of these and other pamphlets, were distributed through the division. When to this number is added that included in the various issues of "Health News," the grand total reaches 332,000 pieces. The significance of this service is all the more pronounced by reason of the fact that no attempt has been made to send these pamphlets indiscriminately or broadcast over the land, but every effort has been made to limit their distribution in such a way as to insure the greatest amount of educational and practical results.

The loan service constitutes a more and more important function of the division. In it is maintained exhibit equipment that includes motion picture films, lantern slides, posters, wall panels, cuts of public health cartoons and mechanical and still models. These are all available for public use without cost other than transportation charges one way. This material, with the exception of the models, which are shown largely during the fall months in connection with county fairs, has been constantly in use by various communities throughout the State. Due to the increased efficiency of the division all of the equipment, save that of the models, was used much more extensively during the second half of the year than was the case for the first half, or for any previous similar period. Table 20, at the end of this section, indicates the number of showings by months for the several different types of exhibit material and shows the decided increase that marked its utilization during recent months. In addition to the displays already made an unusually large number of reservations have been made for exhibitions during the first half of the coming fiscal year.

The remaining regular duties of the division may be classified under the headings of publicity, library service of the department and editing of division reports. The first consists of special material prepared for the daily press, for periodicals, for a weekly press service and

for daily and weekly newspapers. Two medical journals (one weekly and one monthly), a monthly public health journal and more than 800 daily and weekly newspapers, are regularly supplied with material of current value through this function. The matter submitted has been constantly utilized and doubtless has worked to the distinct and permanent benefit of the public.

The department library service has been so completely reorganized that it actually constitutes a new work. Beginning with the month of February, the periodicals for which the department subscribes are, upon receipt, loaned immediately to those members of the department staff who are most interested in the subject matter treated in particular publications. Articles of special merit are abstracted and the latter are kept on file in the division office. In this way the personnel of the department is kept in easy touch with current public health literature and the periodicals are more extensively read.

The third service mentioned includes the receipt and editing of reports, monthly, semi-annual and annual from the other divisions of the department. These are compiled in popular and readable form and published either in "Health News" or in special form.

The following tabulation shows by months the number of showings of the various types of exhibit material and the number of pieces of literature distributed, the number of books and periodicals taken from the library, and the number of letters written. Attention is particularly invited to the large increase along all lines for the latter part of the year:

TABLE 20.

1920-1921.	Films.	†Literature.	Posters.	Slides Sets.	Cuts.	Models.	*Books and Periodicals.	*Letters Written.
July.....	6	250	-----	-----	2	-----	-----	-----
August.....	12	500	244	1	4	1	-----	-----
September.....	30	500	120	1	1	2	-----	-----
October.....	4	500	60	-----	4	-----	-----	-----
November.....	25	11,000	10	-----	5	1	-----	-----
December.....	33	1,500	50	1	2	1	-----	-----
January.....	49	7,304	130	-----	2	-----	126	94
February.....	21	3,365	25	-----	-----	-----	110	95
March.....	47	10,267	124	-----	4	-----	119	131
April.....	42	55,000	288	3	20	1	113	515
May.....	43	50,000	257	1	-----	-----	110	165
June.....	27	25,000	100	-----	6	-----	111	298
Total.....	345	200,186	1,652	7	50	6	859	798

* Records kept for last six months only.

† Monthly bulletin not included.

SPECIAL.

Four particular events constituted special work carried out by the division during the year. These relate to a State wide better babies conference, health promotion week, two displays of the entire exhibit equipment of the department, and the arrangement for health demon-

strations in connection with the Pageant of Progress in Chicago and the State Fair of Springfield.

The better babies conference is an annual event conducted by the department in connection with the State Fair at Springfield. This division is responsible for all the work incident thereto except that of the actual examinations and the consultation service that follows. In arranging for the conference the division not only prepared special rules, application blanks and score cards, but carried out a publicity program that resulted in the largest and most successful conference that was ever undertaken by the department. The total number of children examined was 756 compared with 250 for the first conference in 1915, and 542 for the fourth conference in 1919. The growth of the institution has been due to the fact that it has admirably fulfilled the educational purpose for which it was created and to the vigor with which the division has handled the work relative thereto from year to year. Nor has the growth of the movement been confined to the State conference alone. Local communities have come to realize the importance of creating a lively interest in the welfare of children and have followed the department in stimulating such interest through the medium of better baby conferences.

During the year the division furnished score cards and other material information relative to organizing and carrying out conferences to twelve different communities besides numerous other places where conferences were held in connection with health promotion week. This is mentioned for the reason that this widespread interest on the part of the people in a movement so significant and important, demonstrates to the department that a broad field of service is now open and that through the better baby conference movement a vast amount of educational service can be accomplished that otherwise would be almost, if not wholly, impossible. Indeed, with the interest displayed during the latter part of the year in work of this kind, it is not too much to anticipate that a few more years will see the better baby conference with as definite a place in the program of every county fair in the State, as live stock now holds.

Health promotion week is also an annual project. Each year, either by legislative resolution or by proclamation of the Governor, a week is set aside for the study of public health problems and the promotion of health. The State Department of Public Health is charged with the duty of carrying out a suitable program on a State wide basis and this division is responsible for the success of the undertaking. This year the week designated was April 17-23, and the campaign was put in motion with more vigor than at any previous time since the inauguration of the event. It is significant to note that the week was generally observed throughout the State, although the campaign work was accomplished through the division without unusual or special expense and

with but a limited amount of help from other divisions of the department. More than 8,300 individual letters were sent out by the division to health officers, mayors, nurses, school superintendents and principals, members of women's clubs, Y. M. C. A. and Y. W. C. A. officials and others. In addition to this the daily press was supplied with publicity material for two weeks in advance and during the entire week, while a considerable quantity of literature was prepared and issued in pamphlet form. Altogether more than 85,000 pieces of literature were distributed and the exhibit material of the department was in constant use during the week. Communications from 119 communities brought the information that a definite program was carried out in that number of places, and doubtless many other localities observed the occasion in an appropriate way. Perhaps the most encouraging feature of the program grows out of the success of the movement in stimulating during the week the establishment of some permanent public health service. That this was done in many places has been proved by subsequent developments and the fact that public health nursing service and better baby conferences have been put on a permanent basis in many places.

Not least in importance of the special work done by the division during the year was a display of the entire exhibit equipment at the State Fair and at the Coliseum in Chicago. While only a relatively limited number of the people in the State can be reached on these occasions, still the presentation of fundamental health principles by means of mechanical and still models makes such a pronounced and lasting impression on all who see them that it is felt to be an important educational medium. As a result of the two demonstrations mentioned above the division has received thousands of requests for detailed information along the lines suggested by the exhibit. Many requests also for the use of the exhibit material from both local communities and agencies in other states have been received.

The closing of the year finds the division engaged in two important pieces of work, the arrangement for an unusually elaborate public health demonstration in connection with the Pageant of Progress to be held on the Municipal Pier in Chicago, and the preparation for the Sixth Annual Better Babies Conference to be held at the State Fair in Springfield. For the first of these the division has supervised the purchase and in most cases the construction of fifteen new models, eight of which are mechanical, and has made all provisions for carrying out the demonstration. The models have been built in a manner that makes them suitable for future use, and these together with three new films and fifty-two new wall panels recently purchased, give the department an unusually large and up-to-date equipment that is believed to be one of the most complete in the country.

The second piece of work embraces the State better babies conference. Practically all of the material is on hand and arrangements have been made to open the publicity campaign.

RECOMMENDATIONS.

Two reasons explain why the most urgent recommendation of this division is for an increase in personnel. These are the unusual growth and popularity of the better babies conference movement and the widespread demand for public health demonstrations. Both offer exceptionally effective means for educating the public in constructive public health work and preventive medicine, and the practical usefulness of the former is limited only by the ability of the department to introduce and establish it in the right way. If the department fails in this duty local baby conferences will be established without its assistance and in many instances they will be conducted in the form of a show without giving the educational benefits for which the movement was originally inaugurated, and to gain which constitutes the only practical reason for its continuity and extension.

It is, therefore, strongly recommended that two full-time nurses be attached to the division. Their duty will be to visit local communities that request such service and see that better baby conferences are organized and carried out upon the high standard and in the practical way established by the State Department of Public Health. Their services will relieve the division of the necessity for calling upon other divisions for personal assistance of this kind, that has in the past been given, often at the expense of neglecting other important work. When not needed for this type of work, which is heaviest during the seasons of the year (from April to October) when better baby conferences are most practical, they would be available for duty under the State supervising nurse.

The exhibit equipment now consists of such an extensive amount of material and the demand for its use is so widespread, that an assistant is needed to supervise its handling, care and exhibition. In addition he would be expected to make schedules for health demonstrations.

With these additions the personnel would be ample not only to extend its educational service along every line during the next biennium but at the same time develop greater efficiency.

DIVISION OF SOCIAL HYGIENE.

G. G. TAYLOR, M. D., *Chief.*

Since its creation on July 1, 1918, the Division of Social Hygiene has functioned in a capacity designed to suppress, control and eradicate venereal diseases. Each succeeding year has made more and more apparent the startling prevalence of these diseases and has demonstrated to a high degree the value of and necessity for the work carried on by the division.

The first year of its existence the division was furnished wholly by the Federal Government, from which source, it drew and expended \$66,307.51. During the next two fiscal years, the second of which ended June 30, 1921, it received jointly from the Federal and State funds \$100,000 annually. Early in 1921, however, it became known that Congress had refused to make further appropriations for this service on the grounds that social hygiene programs at their inception, were war measures and no longer justified Federal aid and also had become so firmly established in many sections of the country and had so demonstrated their economic and social importance, that states generally would feel impelled for the public good to continue and extend these activities.

This was the case in Illinois. More than a score of clinics had been established upon a subsidy basis and their continuity depended, in most cases, upon favorable legislative action whereby sufficient funds would be made available to affect the stoppage of Federal aid. Not only was the existence of the clinics in jeopardy, but the expansive educational program that had been a leading feature in the venereal disease campaign faced the possibility of serious curtailment. The situation was presented to the Fifty-second General Assembly by the newly appointed Director of the department and that body saw fit to increase the State appropriation for the division from \$50,000 to \$100,000 per annum, so that the venereal disease program as outlined and instituted by the department will be continued in all of its essential features during the coming biennium.

For the fiscal year just closed the work of the division proceeded along lines established at the outset. These conform, in general, to the venereal disease program suggested by the Inter-departmental Social Hygiene Board, which board was created by act of Congress for the purpose of administering funds appropriated for venereal disease control. The functions of the division are classified, as shown in the accompany-

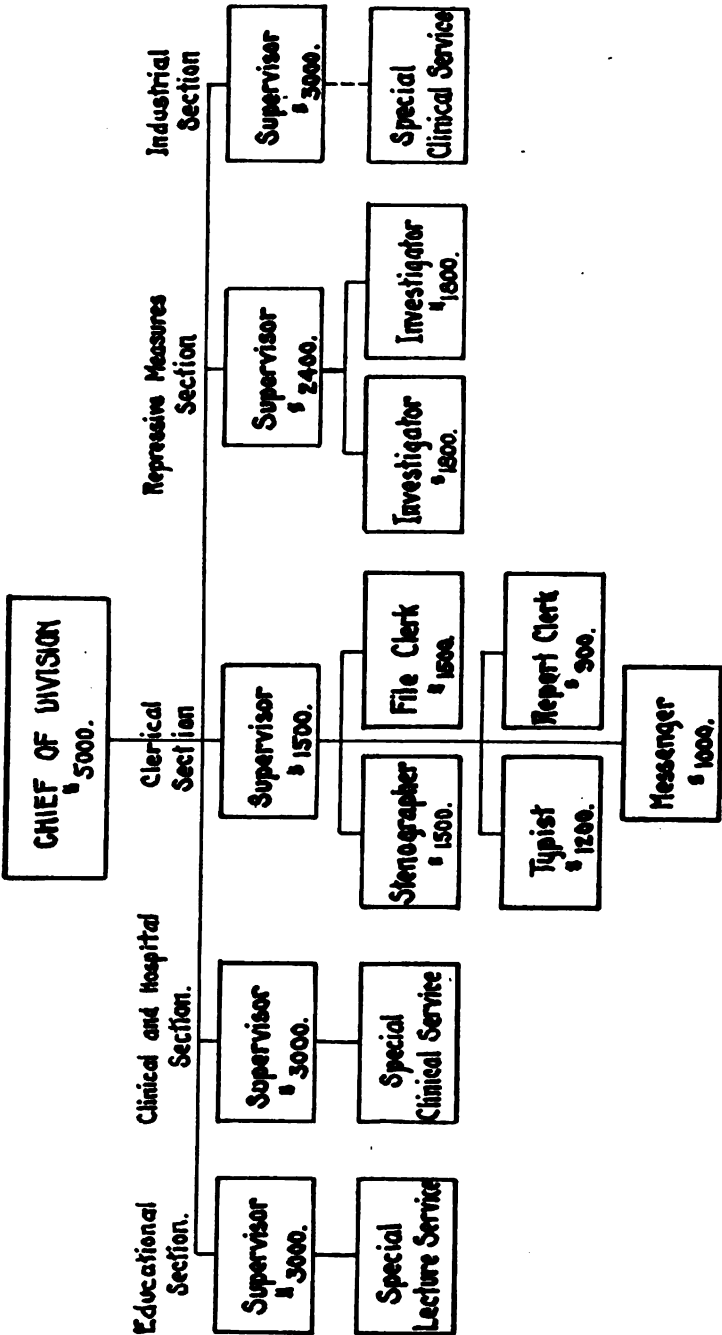


Figure XXV—Divisional Organization for Biennium, 1921-1923.

ing chart, under the headings of treatment, repressive measures and educational measures.

TREATMENT.

Since every case of venereal disease arises by contagion, direct or indirect, it follows that early and thorough treatment of infectious cases must have an important preventive action. In other words, the widespread provision of facilities for prompt treatment is a measure not only beneficial to the individual concerned, but also of exceedingly great importance as a protective measure to the community in which he lives.

The division has, therefore, persistently worked for the establishment and maintenance of free clinics for all sufferers who are financially unable to secure the services of a reputable physician. At the close of the year eighteen such clinics were in operation under the direction of the division. They were all working upon the subsidy plan whereby the division and the community bear jointly the expenses and which was described in detail in the third annual report. No new clinics were established under the division during the year for the reason that the necessary funds for subsidizing them were not available. On the other hand, every effort has been made to secure the greatest possible efficiency from those in operation and to encourage the establishment of clinics without subsidy. That the efficiency was greatly improved is demonstrated by the fact that a total of 37,254 persons were treated for venereal disease infection during the year against 30,005 for the year before.

The clinics established are designed to offer:

- First, the examination of all pathological material for diagnostic purposes;
- Second, provision for the modern forms of treatment for all venereal diseases;
- Third, free supply of salvarsan or its substitutes in suitable cases;
- Fourth, opportunities for consultation on cases between the directors of the clinics, district health officers, and any practitioner who cares to avail himself thereof;
- Fifth, opportunities for physicians and students to familiarize themselves with modern methods of diagnosis and treatment.

Clinics in operation at the close of the fiscal year are located at Alton, Cairo, Carlinville, five in Chicago, Chicago Heights, Decatur, East St. Louis, Litchfield, Moline, Peoria, Rockford, Rock Island, Springfield and West Hammond.

The work accomplished at these clinics during the year is summarized as follows:

	Male.	Female.
Patients hospitalized	211	151
Number patients discharged	3,007	1,269
Number patients discontinuing treatment	2,724	1,554
Number patients placed in detention	47	195
Total number cases of disease treated		37,254
Total number treatments administered (including arsphenamine)		135,075
Number Wassermann tests		21,120
Number of microscopic examinations for the treponema pallidum		1,130
Number of microscopic examinations for the gonococcus		14,373
Number of doses of arsphenamine administered		27,634
Number of ampoules arsphenamine distributed by division		19,618

The following is a tabulation (Table 21) of complete venereal disease reports received by the Illinois Department of Public Health for the year ending June 30, 1921:

	Gonorrhea.	Syphilis.	Chancroid.	Total.
Age—				
1-12.....	53	80		133
12-16.....	84	121	5	210
16-20.....	735	301	39	1,075
20-30.....	2,579	1,326	167	4,072
30-40.....	673	598	57	1,328
40-50.....	237	310	16	563
50 and over.....	87	182	13	282
				7,663
Sex—				
Male.....	3,528	1,889	263	5,680
Female.....	920	1,029	34	1,983
				7,663
Color—				
White.....	4,096	2,324	247	6,667
Black.....	352	594	50	996
				7,663
Social status—				
Single.....	3,145	1,432	223	4,800
Married.....	1,045	1,037	42	2,124
Widowed.....	117	207	14	338
Divorced.....	141	242	18	401
				7,663
Place—				
City.....	3,431	2,298	235	5,964
Town.....	1,017	620	62	1,699
				7,663
Occupation—				
Business man.....	209	86	10	305
Chauffeur.....	105	54	9	168
Clerk.....	338	174	19	531
Cook or waiter.....	66	98	3	167
Farmer.....	244	146	10	400
Idle.....	447	396	16	859
Laborer.....	2,004	922	171	3,097
Mechanic.....	108	79	14	201
Miscellaneous.....	809	839	42	1,690
Prostitute.....	118	124	3	245
				7,663
Laboratory finding —				
Positive.....	2,588	2,159	60	4,807
Negative.....	124	181	53	358
None.....	1,736	598	184	2,518
				7,663
Residence—				
Boarding House.....	1,014	579	105	1,698
Home.....	3,045	1,875	163	5,083
Hospital.....	86	123	8	217
Hotel.....	173	138	12	323
Institution or jail.....	130	203	9	342
				7,663
Source of infection—				
Contracted.....	3,904	2,322	246	6,472
Inherited.....	544	596	51	1,191
				7,663
Investigated.....	488	302	140	930

	Gonorrhea.	Syphilis.	Chancroid.	Total.
Stage—				
Primary or acute.....	2,973	847	124	3,944
Secondary or subacute.....	591	851	89	1,531
Tertiary or chronic.....	884	1,220	84	2,188
				7,663
Discontinued employment.....	720	546	64	1,330
Handling foodstuffs.....	121	136	4	261
Patients under treatment.....	4,448	2,918	297	7,663
Number complete reports received from physicians from which above tabulation was made.....				7,663
Number incomplete reports received from physicians, druggists, State institutions, clinics and the Chicago City Health Department.....				30,240
Total cases reported for the year ending June 30, 1921.....				37,903
Total cases reported for the year ending June 30, 1920.....				31,876

REPRESSIVE ACTIVITIES.

It was pointed out in the third annual report that in order to prevent the spread of venereal diseases it is necessary to render non-infectious every carrier of these diseases and to prevent contact between healthy and diseased persons. Efforts to accomplish the first of these, it was shown, came unquestionably under the jurisdiction of health departments while activities bearing upon the second proposition always meet with considerable opposition.

Public opinion in this country has long since been directed against open prostitution for it has been recognized fully that such practice constitutes an easy opportunity for the widespread exposure of healthy persons to venereally infected persons. On the other hand, investigations have shown that clandestine prostitution has gone on apace and that the most rigid measures are necessary to prevent the segregation and public operation of persons engaged in this nefarious business. In many cases the local officials simply wink at such practice and unless pressure is brought to bear from some State source the laws that prohibit prostitution are of no avail.

During the year, therefore, the suppressive work of the division has been directed chiefly toward securing the cooperation of city and county officials in law enforcement. This has been done through the investigation of vice conditions and the presentation of information thus obtained to the local authorities. Forty investigations of this kind were conducted during the year in various parts of the State with the result that 930 sources of infection were brought to light and the persons placed under treatment. In five instances the municipal officials saw fit to pass local ordinances so that such cases can be prosecuted with more dispatch in the future.

Legal control measures have been greatly strengthened during the year because of court decisions in several cases. In North Carolina the Supreme Court affirmed a judgment allowing a wife to recover damages in the sum of \$10,000 from her husband because he had infected her

with a venereal disease. In Oklahoma a man was sentenced to five years in the penitentiary for infecting a girl with syphilis. A Nebraska court upheld a doctor who had warned an hotel keeper that one of his patients, a guest at the hotel, had syphilis and had refused treatment and was consequently a menace to the public health. All three cases are valuable in counteracting incorrect opinion that the venereal disease law falls almost exclusively on women and in placing personal responsibility for the transmission of venereal disease. The Nebraska case carries particular significance since it asserts that a physician's duty to protect the public health may, under certain circumstances, transcend his duty to hold his patient's confidence inviolable.

Following is a summary of the suppressive activities of the division during the year:

Number of State laws passed during period (appropriation).....	1
Number of city ordinances passed during period.....	5
Number of prosecutions of violators of ophthalmia neonatorum law.....	2
Number of vice investigations	40
Number sources of infection investigated and placed under treatment.....	930

EDUCATIONAL WORK.

In considering what can be accomplished by educational methods in checking venereal disease, it is desirable to arrive at an understanding as to what is meant by education. Mere instruction in the presentation of definite facts is not really education. The real problem of education should be restricted to its literal sense of leading the mind in the proper habits of thought and a right outlook on the problems of life. In this way education can be of use only indirectly by helping to guide the activities of individuals toward a right standard of conduct. In other words, education must aim at developing the self control necessary to keep in check the sexual instinct and at inculcating into the individual sound principles of social morality; in addition to this, instruction in the facts relating to venereal disease and its many consequences to the individual and the race. Education along these lines is a process which must be begun early in life as a foundation on which to base a knowledge of the subject.

There are two separate propositions to consider, first, in what way the general scheme of education can be reinforced so as to make a higher standard of conduct; second, whether, and if so, how far actual instruction in the facts of biology and venereal disease should be introduced into the educational system of the adolescent.

The first step should be taken in early life while the child is entirely under parental control. Parents should be encouraged to realize that their responsibility begins early. A successful system of education should aim not only at equipping young people with a knowledge of facts but also at moulding character along the lines best adapted for developing them into useful citizens. Early teaching in these matters forms a vital part in the standard of conduct for the years to follow. The ideals thus established should form the basis of future action.

The subject of sex should be taught from a scientific standpoint with the elimination of the intensively personal application that is so apt to hamper its approach under the usual conditions of today. The instruction should be not merely a scientific one, the sentimental or emotional side of the subject should also be made use of in an endeavor to implant sound ideals of sexual conduct. Chivalry, the protection of the weak, the sanctity of maternal devotion, should play their part in the building up of such ideals. In the opinion of this division it is to the teachers, elementary and secondary, that we must look for the sex education of the children of today.

The second problem in education, namely, instruction in the facts of biology and venereal disease, requires careful consideration. To what extent a knowledge of such principles has any influence in developing character along moral lines is still a question. More careful instruction should be provided in regard to moral conduct as bearing upon sexual relations throughout all grades and types of education. Such instruction should be based on moral principles and spiritual considerations, and should not be based only on the physical consequences of immoral conduct. It would perhaps be a good practice for medical men to conduct classes in general hygiene and to use these classes for the purpose of presenting the necessary information on these subjects.

If a medical man is selected to conduct classes in general hygiene the instruction should include:

- (a) A description of the two diseases, gonorrhea and syphilis, with their complications sequelae, and the effects on the offspring;
- (b) Insistence on the need of early and sufficient treatment, the danger of concealment, and the danger from use of quack remedies;
- (c) Prevention guaranteed only by keeping out of the way of possible infection;
- (d) Exposure of the fallacy that only professional prostitutes are dangerous—in many cases, the amateur is equally or more dangerous;
- (e) Denunciation of the idea that continence is ever harmful and that incontinence is an essential attribute of manliness;
- (f) The contributory effect of alcoholic indulgence by diminishing self control.

With the firm conviction that permanent and lasting benefits in the control of venereal diseases can accrue only through educational measures, no matter how important treatment and suppressive measures may be, the division has given a constantly increasing amount of time and thought to this important function. To the educational methods employed in the past was added, during the year, the publication of a monthly bulletin, known as the Social Hygiene Monthly.

The first issue of the bulletin was published September 1, 1920. Since that time it has been in the mails promptly on the first day of each month. It was created for the purpose of establishing a closer relationship between the practicing physicians of the State, the assistants operating venereal disease clinics and other persons particularly interested in social hygiene and the Division of Social Hygiene. The mailing list contains the names of practically all physicians in Illinois, outside of Chicago, as well as numerous others. That it has filled its mission well and rendered a service far more beneficial than the author had

dared hoped, has been generously demonstrated in the practical results that have followed and in the most favorable recognition of its value by the United States Public Health Service and others.

The lecture work of the division has been carried on vigorously and effectively. Altogether 311 lectures and addresses, or an average of more than one daily, with Sundays and holidays excluded, have been made during the year, with a total attendance of 67,938. Many of these lectures were illustrated with the motion picture films and stereopticon slides owned by the division. In addition to this thousands of pieces of literature have been distributed and several social hygiene demonstrations made.

EDUCATIONAL SUMMARY.

Number of lectures and addresses given.....	311	
Attendance		67,938
Number of days slides and charts shown.....	81	
Attendance		180,988
Number film showings without lecture.....	54	
Attendance		13,600
Total attendance		262,526
Number of requests for pamphlets received.....		5,173
Number of pamphlets distributed		306,241
(a) In response to specific requests.....	180,253	
(b) By circularizing mailing lists.....	79,727	
(c) To clinics, lecturers, field workers.....	46,261	
Number of pamphlets purchased and reprinted.....		150,500
Number of exhibits purchased		34
Number of films purchased		2
Number of booths purchased		2
Publicity material—number of references to venereal disease work noted in newspapers and magazines.....		107

COMPARATIVE STATEMENTS OF THE ACTIVITIES OF THE DIVISION OF SOCIAL HYGIENE FOR THE YEARS ENDING JUNE 30, 1919, 1920 AND 1921.

Number of.	1919	1920	1921
Clinics subsidized.....	6	20	(a) 18
Clinics reporting.....	6	32	(b) 26
Cases hospitalized.....	0	1,360	(c) 362
Wassermann tests.....	0	13,090	21,120
Microscope tests for gonococci.....	0	8,732	14,373
Cases discharged as cured.....	173	2,624	4,276
Cases discontinuing treatment.....	0	3,296	4,278
Cases treated.....	3,926	30,006	37,902
Treatments given.....	9,304	98,754	135,075
Slides and chart showings.....	49	322	*81
Attendance at same.....	15,750	49,387	180,988
Lectures.....	284	572	(d) 311
Attendance at same.....	28,400	97,357	(f) 67,938
Film showings.....	250	(e) 126	54
Attendance at same.....	37,500	18,112	13,600
Pamphlets distributed.....	370,000	654,205	306,241
Cases reported—			
Gonorrhea.....	3,223	4,275	4,448
Syphilis.....	551	2,329	2,918
Chancroid.....	126	306	297

REMARKS:

- (a) Waukegan Clinic discontinued February, 1921. Grand Crossing Clinic—State subsidy ceased June 30, 1920.
- (b) Thirty-three clinics reported during first six months; twenty-six reported during second six months.
- (c) Patients report regularly for treatment but are not hospitalized.
- (d), (e), (f) and (g)—Appropriation insufficient, necessitating reduction in personnel.

DIVISION OF LODGING HOUSE INSPECTION.

WILLIAM W. McCULLOCH, *Superintendent.*

INSPECTIONS.

During the period covered by this report, July 1, 1920, to June 30, 1921, considerable time has been devoted to the measuring and inspecting of lodging houses, boarding houses, taverns, inns and hotels of record. There were also several houses measured and inspected of which there was no previous record.

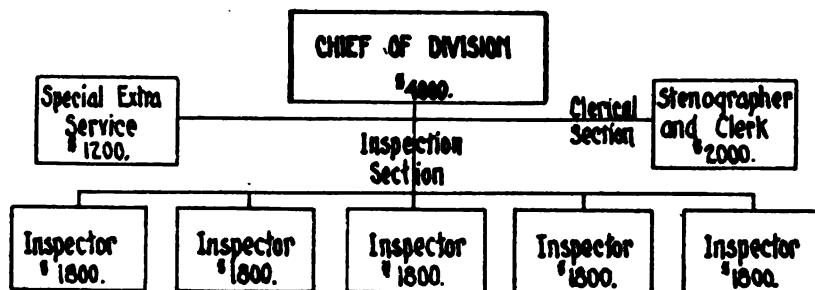


Figure XXVI—Divisional Organization for Biennium, 1921-23.

The number of lodging houses, boarding houses, taverns, inns and hotels inspected, measured and remeasured is as follows:

	Measured.	Remeasured.
1920—		
July	18	24
August	49	26
September	67	39
October	83	44
November	117	14
December	124	10
1921—		
February	5	—
March	15	—
April	7	—
May	16	2
June	34	24
Total	535	185

The inspections of said lodging houses, boarding houses, taverns, inns and hotels showed the total number of rooms to be 16,943; number of lodgers 11,738; present capacity 20,334 and legal capacity 39,353.

For the same period the inspectors reported 122 lodging houses, boarding houses, taverns, inns and hotels as having gone out of business, 67 vacant and 19 torn down.

Below is shown the number of lodging houses, boarding houses, taverns, inns and hotels in which a supplemental inspection was made, together with the number of rooms inspected, the number of lodgers at time of inspection and the number of lodgers for which there were sleeping accommodations:

	Supplemental inspections.	Rooms.	Lodgers.	Present capacity.
1920—				
July.....	168	3,144	2,367	4,354
August.....	214	3,270	2,331	4,382
September.....	211	3,259	2,456	4,460
October.....	167	3,000	2,452	4,170
November.....	52	809	465	911
December.....	130	8,797	7,879	11,802
1921—				
January.....	2	31	19	37
February.....	3	37	30	51
March.....	51	2,114	1,828	3,201
April.....	17	381	265	549
May.....	48	1,215	756	1,424
June.....	170	2,661	1,779	3,704
Total.....	1,233	28,718	22,627	39,025

During the months of January and February, 1921, the inspectors served notices on proprietors and managers of lodging houses, boarding houses, taverns, inns and hotels to file a sworn statement required to be filed March 1 each year. The inspectors served 6,308 notices on proprietors and managers of houses, which had residing therein 105,194 persons.

In April and May, 1921, the inspectors served 2,386 second or final notices on proprietors and managers of lodging houses, boarding houses, taverns, inns and hotels which had 25,931 guests therein. Proprietors and managers of these houses had failed to file with the county clerk the sworn statement required by the Department of Public Health to be filed March 1.

During the period of time covered by this report, 5,409 sworn statements were filed with the county clerk by the proprietors, keepers or managers of lodging houses, boarding houses, taverns, inns and hotels. The inspectors have from time to time been assigned to work in the office of the county clerk in connection with the filing of these sworn statements with the county clerk, and making copies thereof for the department.

On November 24, 1920, at the request of the Director of the department, Inspectors Charles H. Buenneke and William J. Angsten were assigned to work at the Coliseum in Chicago, and from November 24 to December 1, assisted with the exhibit of the Illinois Department of

Public Health in that building. Inspectors Edward B. Kirkbride and Edward Matthes also assisted November 30 in taking down and packing this exhibit for shipment.

June 6, 1921, Inspector Charles H. Buenneke submitted to me his resignation as lodging house inspector, the same to become effective June 10, 1921, and it was accepted.

The inspectors while making their inspections have found numerous violations of the public health laws pertaining to lodging houses, boarding houses, taverns, inns and hotels. These violations, which consist of over-crowding and insanitary conditions such as defective and leaky plumbing, lack of ventilation in sleeping rooms, filthy toilets, walls, floors, beds and bedding, inadequate water supply for toilet and other plumbing fixtures, and accumulations of rubbish and debris in basements, hallways and rooms, have been reported to me by the inspectors, and I have caused a written notice to be served by the inspectors on the proprietor of each house where such violation was found, directing that the management put the premises in sanitary condition and otherwise comply with the provisions of the Board of Health Act. In each case from three to ten days have been allowed in which to correct the conditions of which complaint was made. Most of these houses have been reinspected since the serving of such notices and the inspectors' reports show that the violations formerly complained of have been corrected.

DIVISION OF SURVEYS AND RURAL HYGIENE.

B. K. RICHARDSON, *Acting Chief.*

During the fiscal year that closed June 30, 1921, the Division of Surveys and Rural Hygiene lost its identity as an independent division and was made a part of the Division of Sanitation and Engineering. Prior to this change, however, which took place in February the division undertook and carried out a complete sanitary survey of the city of Quincy. The study was exhaustive and comprehensive in character. It led to recommendations that were offered as a practical means for solving many of the existing sanitary problems and for giving the city a well balanced and efficient public health service.

Steps have been taken for carrying out these recommendations in a large measure. A full-time medical health officer has already been employed and the machinery established for developing a well rounded department of public health. Funds to the sum of about \$18,000 or about 50 cents per capita have been made available for health work for the current fiscal year. The full adoption of the recommendations submitted will find Quincy with one of the best municipal public health organizations in the State.

The report of the survey is presented herewith.

GENERAL INFORMATION.

Quincy is situated in Adams County on the east bank of the Mississippi River. The back country is of the more fertile section of the rich agricultural districts in Illinois and depends on Quincy to market a large percentage of its varied products.

The transportation facilities of Quincy are very good. Two railroad systems, the Wabash and the C. B. & Q., offer the city the advantages of rapid rail transit while river traffic is still considerable.

Quincy has a population of 35,978, according to the preliminary 1920 census returns. This shows a net decrease of 609 since 1910 when the census returns indicated a population of 36,587. The decrease in population is, no doubt, explained in part at least, by reason of the very low birth rate that prevails in Quincy coupled with the inroads upon the citizens by the influenza pandemic and the war casualties. It may be further observed that Quincy experienced no abnormal modification or change in character or size of population on account of war activities.

The people of Quincy come mostly from sturdy American stock. English and German extractions appear in about equal numbers. There is also a negro population of a little more than 1,000.

A close observer will detect a character of thrift that permeates the entire city. This trait applies to the German element almost to a fault.

Politics play a considerable part in the life of the city. This seems to be rather more true than usual in such communities. Perhaps the reason for this is found in the fact that the leading parties are almost equally divided so that community effort and community progress as such is rather hard to obtain.

Most of the progressive life in the city associates itself with the Chamber of Commerce and with the business men's clubs. Almost every measure of a progressive and permanent character finds birth in these organizations and depends upon them for support.

Quincy is an industrial city. Over two hundred products are made there and of these more than a score are manufactured in considerable quantity. Such things as foundry products, stoves, pumps and compressors, tractors, steel and wooden wheels, elevators, shoes, show cases, cereals, incubators, stock foods, strawboard and paper dyes, tobacco and wagons are among the more prominent of these products.

PUBLIC HEALTH SERVICE.

Public health service in Quincy is administered at present, through what is known as the Health Department. This department consists of the Board of Health, Commissioner of Health and his office assistant.

The Board of Health serves without pay and is composed of the mayor, who is its president, two aldermen and two physicians appointed by him. Monthly meetings of the board are required by city ordinance.

The working force of the health department consists of the Commissioner of Health and his office assistant. The commissioner is not a medical man and confines his activities to placarding houses for quarantine and the making of sanitary inspections. Since the size of the city makes frequent and regular inspections by one man a prohibitive task the commissioner is able to give his attention only to those conditions that warrant no delay in abatement.

The organization for public health administration has been changed in character and personnel from time to time depending largely upon party politics. With the arrival of May 1, 1921, the beginning of a new fiscal year in Quincy, however, public health administration will be organized under a State law on a permanent basis. Beginning at that time there will be available, annually, a sum of from \$20,000 to \$40,000, depending upon the tax assessment, that can be used for public health purposes only. The State law provides adequately for efficient personnel and equipment. The new administration will also be removed largely from the influence of local politics.

The city maintains no public nursing system whatever. Milk and food inspection is left entirely to the infrequent visits of State inspectors. School children are without medical inspection; neither nurse nor physician is employed for this important work. The city provides pest houses for contagious disease patients but no hospital facilities are available for them.

Extra-governmental agencies maintain two full-time nurses who do visiting nursing throughout the city. There is also a county tuberculosis nurse paid by the Red Cross but she spends very little time or effort in Quincy.

The county maintains a splendid tuberculosis sanitarium located about two miles out of Quincy. The plant is a magnificent institution but its value and importance seems not to have been fully appreciated by the citizens of Quincy and the county.

FINANCIAL TREATMENT.

During the past four fiscal years the expenditures by municipal government for fire, police and health protection has been as follows:

TABLE 22—FOR THE FISCAL YEAR ENDING APRIL, 30.

	1917	1918	1919	1920
Fire Department.....	\$51,332.78	\$51,429.09	\$66,539.31	\$78,384.74
Police Department.....	35,936.51	40,768.89	42,739.51	56,757.51
Health Department.....	6,767.57	2,762.94	4,020.00	3,395.26

The expenditures listed in the table indicate that fire and police protection have been practically considered of much greater importance than health protection. The figures are taken from the official annual report of the city of Quincy. The average annual expenditure during the four years for the fire department was \$61,921.53; for the police department \$44,050.02; for the health department \$4,236.44. These totals correspond to an average annual per capita expenditure for the three departments as follows:

TABLE 23—AVERAGE ANNUAL PER CAPITA EXPENDITURE.

Fire department	\$1.72
Police department	1.22
Health department .....	.11

Extra-governmental agencies have been spending approximately \$5,000 per annum during the same period.

Estimates of the tax levy for health work in the future indicate that about \$18,000, or approximately 50 cents per capita, will be available for the new health department at its inauguration next spring.

BIRTHS.

A part of the sanitary and health survey in Quincy dealt with birth registration. In the course of the house-to-house canvass incident to the survey it was determined that births are being reported about 98 per cent complete. Figures for the calendar years 1916-1919 inclusive show births reported as indicated in the following table. The table gives also the birth rates per 1,000 of population based upon a population of 35,978.

TABLE 24.

	1916	1917	1918	1919
Number of births.....	567	567	618	536
Rate per 1,000 population.....	15	15	17	14

The figures in the table indicate an average annual birth rate slightly more than 15 per 1,000 population or an increase in population from births of about 1.5 per cent.

The table below shows the number of births reported and the average annual birth rate per 1,000 population by wards. It also gives totals of births and rates for the city for the years indicated.

TABLE 25—BIRTHS BY WARD AND YEAR AND ANNUAL BIRTH RATE.

Ward.	1916	1917	1918	1919	Total.	Average annual birth rate.
1.....	74	94	77	67	312	15.9
2.....	54	42	59	44	199	10.6
3.....	69	83	86	84	322	17.2
4.....	99	114	115	97	425	17.0
5.....	104	95	114	100	413	15.8
6.....	120	102	115	98	435	17.9
7.....	47	37	52	46	182	15.4
Total.....	567	567	618	536	2,288	-----
Annual rate.....	15.7	15.7	17.1	14.8	-----	15.8

A comparison shows that the birth rate in Quincy falls noticeably short of that which prevails in some other Illinois cities of similar size and character. During the same period when Quincy had a rate of 15.8, Alton had 22.8, Decatur 19.7 and Moline 19.5. Still more significant is the fact that while Quincy had an exceptionally low birth rate she had a death rate higher than that of Illinois cities generally. Facts about mortality appear elsewhere in this report.

INFANT MORTALITY.

The infant mortality rate in Quincy has averaged considerably less than that for the United States Registration Area during the years

1916-1919, inclusive. This may be accounted for in part, however, because of a completeness in registration of births in Quincy that is rather exceptional.

The table below indicates the number of deaths of infants under one year of age and the death rate per 1,000 of births for the years considered.

TABLE 26—NUMBER OF DEATHS UNDER ONE AND ANNUAL RATE.
(Exclusive of stillbirths)

	1916	1917	1918	1919	Total.
Number of deaths.....	56	46	57	37	196
Rate per 1,000 births.....	98.7	81.1	92.2	69	85.6

The figures in the table show that infant deaths fluctuate from year to year with the various influences that affect the lives of babies. At present Quincy supports no infant welfare stations and but little work is now being done upon the lines of infant welfare.

The table below gives the number of deaths and the average annual death rates of infants under one year of age by wards for the years considered;

TABLE 27—INFANT DEATHS AND DEATH RATES BY WARDS AND YEARS.
(Exclusive of stillbirths).

Ward.	1916	1917	1918	1919	Total.	Average annual rate.
1.....	5	6	10	3	24	76.9
2.....	9	3	6	1	19	95.4
3.....	2	7	10	5	24	74.5
4.....	7	15	10	6	38	89.4
5.....	20	6	10	10	46	108.9
6.....	11	6	5	10	32	73.5
7.....	2	4	6	2	14	76.9
Total.....	56	46	57	37	196	
Annual rate.....	98.7	81.1	92.2	69		85.6

The cause of death of the babies in Quincy shows that the influenza pandemic affected infants but little in a direct way. On the other hand the high infant mortality rate that prevailed in 1918 brings out the point that the conditions of parents and adults influence the health and lives of babies to a much larger extent than is commonly recognized.

The table below gives the causes of death of infants in Quincy during the years 1916-1919 inclusive. The classification is that of the International List of Causes of Death:

TABLE 28—CAUSES OF INFANT DEATHS UNDER ONE YEAR.

Cause of death.	1916	1917	1918	1919	Total.
Diarrhea and enteritis.....	3	8	6	4	21
Congenital debility and malformation.....	31	19	36	18	104
Pneumonia.....	4	3	2	1	10
Broncho pneumonia.....	4	1	0	.6	11
Acute bronchitis.....	4	3	3	1	11
Influenza.....	1	1	2	3	7
Measles.....	1	0	0	0	1
Disease of larynx.....	1	0	0	1	2
Syphilis.....	0	0	2	0	2
Sudden death.....	3	3	1	0	7
Convulsions of infants.....	1	2	0	1	4
Diphtheria.....	1	1	0	0	2
Disease of heart.....	0	1	0	0	1
Meningitis.....	1	0	0	0	1
Disease of stomach.....	1	0	1	0	2
Other diseases.....	0	4	4	2	10
All causes.....	56	46	57	37	196

Diarrhea and enteritis are shown first in the table because they are considered as positively preventable. An experiment over a period of several years in Richmond, Virginia, and two exhaustive experiments in New York City have unquestionably proved that diarrhea and enteritis in infants are closely connected with the prevalence of house flies and filth. In the Richmond experiment illness and mortality due to diarrhea were reduced in a direct ratio to fly extermination. The same results were obtained in New York City where two city blocks, almost identical in size and character of population, were selected for study. It is also well known that deaths among infants from diarrhea vary directly with the fly seasons. Deaths from these causes begin to increase with the coming of spring and reach a maximum in August when the fly is found in the greatest numbers.

The number of deaths caused by congenital debility and malformation leads the list. This frightful mortality arises largely from ignorance on the part of prospective mothers and a lack of prenatal care.

All the other causes listed are largely preventable. Indeed there is the instance of a certain city in Alsace-Lorraine where infant welfare developed to the point that for periods of more than a year no deaths occurred among infants. Even in our own country there are large numbers of instances where cities have reduced infant mortality by half and in some cases by two-thirds. These examples are proof enough that infant deaths are a waste of human life that can certainly be saved by means of efficient infant welfare service.

One of the most essential prerequisites to efficient infant welfare service is complete and prompt registration of births. This is true because complete birth reports inform the health department of all cases where assistance of one kind or another may be needed to preserve the life and health of mother and child. Immediate reports inform the health department of births at the time when assistance is most valuable.

Early and proper care of infants not only greatly increases the babies' chances for life but also for health. A large percentage of blindness, for example, can be prevented by the use of silver nitrate solution at birth. Other important means for increasing the prospects of infants for health and happiness are at the disposal of an adequate health department. Therefore, it is of especial importance that physicians should be encouraged in making prompt and complete birth reports to the end that all the medical forces of the community may closely cooperate in the great work of preserving life and promoting health.

MORBIDITY.

Communicable disease, with a few exceptions, appear to be reported fairly completely in Quincy. This conclusion is reached after rather careful estimates based on death records from certain diseases. The most important exceptions to the approximately complete reporting are pneumonia, venereal diseases and tuberculosis.

In the case of pneumonia and tuberculosis the number of deaths in a year is generally greater than the number of cases of these diseases reported. The very limited venereal disease incidence reported in Quincy compared with that in various other Illinois cities would seem to indicate a disparity of reports.

There is also the exception of light or apparently insignificant cases of communicable diseases that escape the record books. During the survey, for example, there was a widespread wave of something like dysentery that carried with it, in severe cases, characteristics of typhoid or paratyphoid fever. It was variously diagnosed by local physicians who called it dysentery, summer cholera, paratyphoid, etc. Indeed there were some ten or twelve cases of typical typhoid fever that followed closely upon the heels of the less serious epidemic.

A study of local records dating back to 1912 indicates that the more common of communicable diseases such as diphtheria, scarlet fever, smallpox, measles, etc., have usually been allowed to run their course after making their appearance in the city. This is due, no doubt, to the fact that the health department has never been sufficiently manned to cope properly with the health problems of the city and the salaries paid have not been sufficiently large to attract men able to carry out epidemiological investigations.

The table below shows the number of cases of certain diseases that have been reported since 1912:

TABLE 29—CERTAIN DISEASES REPORTED IN QUINCY BY YEARS.

Diseases.	1912	1913	1914	1915	1916	1917	1918	1919	1920*	Total.
Smallpox.....	21	5	115	216	2	59	243	11	27	699
Measles.....	4	28	3	0	815	190	191	10	10	1,251
Chickenpox (not reported prior to 1915).....				17	54	39	19	23	39	191
Whooping cough (not reported prior 1918).....							95	41	14	150
Diphtheria.....	49	41	22	26	45	71	63	30	24	369
Scarlet fever.....	4	1	4	5	7	22	19	76	69	207
Typhoid fever.....	1	15	41	7	7	18	16	13	2	120

* Reports for 1920 include first 10 months only.

The table above does not include a large number of influenza cases that were reported in 1918. Pneumonia and tuberculosis do not appear in the table because reports were insignificant compared with the number of deaths from these causes.

While the number of cases of the various diseases reported, as indicated in the table, doubtless falls considerably short of the actual incidence in the several cases, yet these figures serve to show that little preventive steps have been taken to eliminate them from the city. Strict quarantine and exhaustive epidemiological work are essential to prevent the appearance and spread of communicable disease. It is of little or no value to have complete reports of communicable disease incidence unless the information thus acquired is utilized as a guide for effort that will safeguard the community against the spread and recurrence of such diseases. On the other hand a health department is like a ship at sea without a rudder when it attempts to function without prompt and complete reports of communicable disease incidence. Progress in community health promotion and disease prevention depends very largely upon the active cooperation of the local health department with the medical profession and there is every reason to believe that such cooperation can be readily obtained in Quincy.

GENERAL MORTALITY.

Mortality from all causes among residents only in Quincy appears to be slightly in excess of that in Moline, Illinois, a city similar in size, character and location. It also appears to be considerably higher than the rate for the State of Illinois and slightly higher than that for the United States Registration Area regardless of the fact that both residents and non-residents are considered in the two latter instances.

TABLE 30—DEATH RATES FROM ALL CAUSES PER 1,000 POPULATION.

Year.	1916	1917	1918	1919	Average.
Quincy/Number deaths.....	553	512	650	401	
Rate.....	15.3	14.2	18	11.1	14.6
Moline rate only.....		11.2	17.5	11.3	13.3
Illinois rate only.....	13.2	13.8	16.3	12.0	13.8
U. S. Registration Area rate only.....	13.9	14.0	18.0		15.3

The average rate, as shown in the table, is higher for Quincy than for any of the other units except the United States Registration Area. In the case of the latter, figures for 1919 are not available so that this unit has the disadvantage of a high rate for 1918, resulting from influenza, and is unable to offset the increased rate by a decidedly lower rate in 1919 as is the case with the other units.

The rather excessive death rate in Quincy as compared with the other units listed in the table above may be somewhat explained by the fact that several institutions for old people are located there. These institutions accept applicants from various parts of the country and while some of those admitted become citizens of Quincy, still the system results in segregating the aged and consequently influences somewhat the local death rate. However, this influence over the general death rate becomes almost negligible when the number of deaths are considered with reference to age. A little more than 45 per cent of the deaths in Quincy during the four years studied occurred among citizens under 50 years of age.

A serious feature of the rather excessive death rate in Quincy is that it almost offsets entirely the increase in population from births. The table below compares the number of births and deaths that occurred among residents in Quincy during the four year period 1916-1919:

TABLE 31—NUMBEP. OF BIRTHS AND DEATHS, RATES PER 1,000 POPULATION.

Year.	1916	1917	1918	1919	Total.
Number of births.....	567	567	618	536	2,288
Number of deaths.....	553	512	650	401	2,116
Birth rate.....	15.7	15.7	17.1	14.8	.....
Death rate.....	15.3	14.2	18	11.1	.....
Average annual birth rate for period.....	.....	.....	.....	.....	15.8
Average annual death rate for period.....	.....	.....	.....	.....	14.6

The table shows that the population in Quincy increased from births at the rate of 1.6 per cent over a period of four years and that it decreased from deaths at the rate of 1.5 per cent during the same period. In other words there were only 172 more persons born than died among the residents of the city in four years. This would make an average yearly increase in population from births of only 43.

Perhaps the most serious feature of these facts is that a large percentage of the deaths have occurred among citizens less than fifty years of age and from causes largely preventable. It would seem that these facts alone would completely justify the action of the community in establishing a public health district and in the preparation for a first class public health administration. Money and effort can be spent to no greater advantage in Quincy than to the end of reducing the excessive death rate and decreasing communicable disease incidence.

The principal causes of death in Quincy are shown in the table below. The number of deaths from the various causes listed are shown by years and by totals for the period studied:

TABLE 32.
PRINCIPAL CAUSES OF DEATH.

Cause of death.	1916	1917	1918	1919	Total.
Organic heart disease.....	82	68	79	57	286
Pneumonia (all forms).....	60	53	57	30	233
Tuberculosis (all forms).....	66	39	53	38	196
Influenza.....	13	14	119	22	168
Cerebral hemorrhage.....	33	43	34	38	148
Cancer (all forms).....	35	27	44	35	141
Bright's disease.....	29	39	29	19	116
Congenital debility and malformation.....	25	21	31	16	93
Accidents.....	14	13	19	16	64
Diarrhoes and enteritis.....	11	15	14	9	49
Bronchitis (all form.).....	14	13	14	5	46
Diabetes.....	14	12	12	5	43
Senility.....	11	14	9	4	38
Cirrhosis of liver.....	6	7	10	7	30
Diphtheria.....	6	7	6	3	22
Suicide.....	8	6	4	4	22
Intestinal obstruction.....	3	5	7	4	19
Disability peculiar to infancy.....	7	1	5	3	16
Syphilis.....	5	5	4	2	16
Measles.....	11	1	3	0	15
Typhoid fever.....	2	6	2	3	13
Appendicitis.....	3	2	3	3	11
Paralysis.....	2	2	4	1	9
Puerperal septicemia.....	2	2	2	1	7
Meningitis.....	2	4	0	1	7
Alcoholism.....	6	1	0	0	7
Peritonitis.....	5	2	0	0	7
Whooping cough.....	0	1	2	3	6
Scarlet fever.....	0	0	2	1	3
All other causes.....	67	87	91	69	314
Total.....	475	423	568	330	1,831

Of the causes of death listed in the table above a large percentage are recognized as absolutely preventable while a still larger percentage are recognized as very largely preventable. The tables below show the number of deaths caused by these classes of diseases:

TABLE 33—PREVENTABLE DEATHS.

	No. of deaths 1916-1919, inclusive.
Tuberculosis (all forms).....	196
Diarrhea and enteritis.....	49
Diphtheria.....	22
Syphilis and locomotor ataxia.....	16
Measles.....	15
Typhoid fever.....	13
Whooping cough.....	6
Scarlet fever.....	3
Total these causes.....	320

The 320 deaths caused by these preventable diseases correspond to a little more than 15 per cent of the total number of deaths among the residents of Quincy from all causes during the period studied.

The number of deaths caused by diseases that are largely preventable are shown below:

TABLE 34—DEATHS FROM CERTAIN CAUSES—LARGELY PREVENTABLE.

	No. of deaths 1916-1919, inclusive.
Pneumonia	228
Influenza	165
Congenital debility and malformation.....	93
Accidents	64
Bronchitis (all forms).....	47
Total these causes.....	595

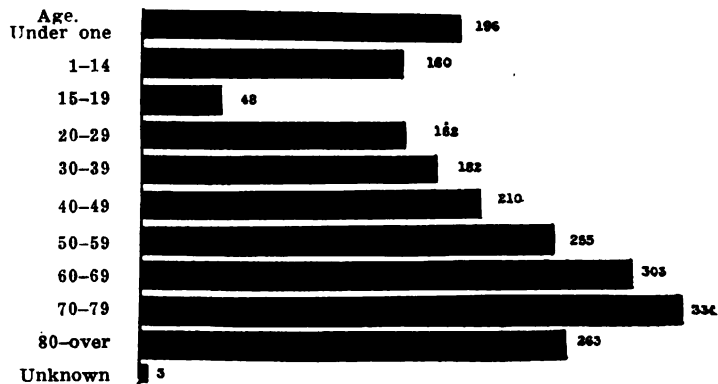


Figure XXVII—Number of deaths among residents of Quincy from 1916 to 1919, inclusive, according to age.

Note the very severe losses among the young citizenship of the community as indicated by the three columns showing the number of deaths between twenty and fifty years of age.

Note also the heavy infant mortality indicated by the first column.

The deaths indicated in the table above were very largely preventable and correspond to a little more than 28 per cent of the total number of deaths from all causes during the period considered.

If the number of deaths due to positively preventable causes be added to those from causes largely preventable there is a total of 915 deaths or a little more than 43 per cent of the total number of deaths that occurred among residents of Quincy from all causes during the four year period 1916-1919 inclusive. In other words almost half the deaths that have occurred during the four year period resulted from preventable causes.

It is also food for thought to know that 748 of the 2,116 residents of Quincy who have died during the four year period had not reached their fortieth year. Instead of living out the allotted "three score years and ten" these 748, or more than 35 per cent of the total number of deaths, failed to reach two score years.

If the number of deaths among people under fifty years be considered it is found that 958 out of the total of 2,116 were in this class. This means that 45 per cent of the total number of residents who died in Quincy during the four years (1916-1919) fell short a score or more of years from the allotted span of human life. These facts are indeed

worthy of the serious attention and the thoughtful consideration of the citizens of the community.

Full significance of the high death rate comes only when it is considered relative to the birth rate and from an economic standpoint. Elsewhere in this report it is shown that the death rate in Quincy almost overshadows the birth rate. If each life under fifty years were valued at \$2,000 the total loss from deaths alone would amount to \$958,000 in the four years considered. These figures correspond to an annual loss of \$239,500 or nearly a quarter of a million dollars. A large per cent of this loss can surely be salvaged since almost all deaths under fifty result from preventable causes.

Another feature of the economic loss incurred from preventable disease finds expression in the loss of time to the patient from these causes. This is scarcely more important than expenses incidental to medical and nursing care during illness and funeral expenses in fatal cases. Again, to the loss of wages or salary to the patient sick from a preventable disease must be added the loss of his service to his employer. Indeed the commercial and industrial lives of our people are so completely interdependent today that the financial expense and loss incurred by the sickness of one wage earner continues to grow and spread its influence until the entire community in which he lives suffers a monetary loss greatly in excess of that of the individual. When considered in this larger sense the annual cost to a community of a few hundred cases of preventable sickness, whether fatal or not, reaches a total sum that is staggering to the senses. To prevent all communicable disease is still a utopian dream but practical experience has proved that an unlimited amount of these diseases can be prevented.

One remarkable example of what practical preventive medicine can do is found in the results obtained among our troops during the World War. Among United States troops during the Spanish-American War 1,600 out of every 10,000 (or 16 out of every 100) contracted typhoid fever. The mortality was frightful. During the World War when several million more men were under arms only 5 out of every 10,000 came down with typhoid in this country and only 16 out of every 10,000 in France. This great reduction in typhoid fever incidence among troops resulted from better sanitary conditions around the camps coupled with the use of typhoid vaccine.

What was true of typhoid fever among our troops in the World War was true of all other communicable diseases. The army as a whole suffered from no epidemics with the single exception of influenza that affected soldier and private citizen alike.

Examples like this surely prove that communities under normal conditions in times of peace can accomplish like results by the use of like methods. Money and effort properly spent in the prevention of com-



Figure XXVIII—Note fly-breeding manure pile and numerous outside privies.
Picture taken a little southeast of St. Vincent Home.



Figure XXIX—Note garbage and filth scattered about an open garbage can.
Picture taken in block opposite city hall.

municable disease will certainly pay big dividends not alone in money but in health and happiness as well.

GENERAL SANITATION.

The foundation for good community health is good community sanitation. This arises from the fact that the human body naturally tends to preserve its life and prolong its existence by throwing off all malevolent substances that may accumulate in it. These substances that tend to poison life and cause sickness, when retained in the body, are expelled through various channels as excreta. It is a simple conclusion that these things, harmful to one person, will create an injury when taken into the body of another person. All insanitary conditions that tend to make difficult the disposal of these harmful and poisonous excreta in a manner beyond the possibility of their coming into the mouth of another person will help to cause disease.

The chief item of excreta disposal is that of fecal matter. This problem becomes more complicated by reason of the many agencies that join hands in an effort to carry this fecal matter from one person to the mouth of another. Among these agencies are soiled hands that handle food; privy vaults that pollute drinking water and furnish breeding places for flies and various vermin; rubbish and filth that harbor rats and other rodents; unsatisfactory garbage disposal that furnish feeding and breeding places for flies, other insects and vermin; insanitary stables where flies breed abundantly and where rats live and multiply. In seeking the cause of community ill health it is, therefore, well to look carefully into the sanitary conditions of that community.

PRIVIES.

The outstanding feature in the prevailing insanitary conditions of Quincy is the exceptionally large number of outside privy vaults found in all parts of the city. In all there are 4,548 or one privy for every seven people in the city. Uncomplimentary as it may seem the facts show that Quincy now maintains more privy vaults per capita than any other city where exhaustive sanitary studies have been made by the State Department of Public Health.

The reasons for eliminating and prohibiting the maintenance of privy vaults in a city are too well known to require space here. That they are breeding places for various vermin, favorite feeding places for the common house fly and altogether lacking in establishing the convenience for which they were created are facts of common knowledge. That diseases of the digestive system and especially typhoid fever and diarrheal diseases are easily and rapidly spread through the agency of the privy, coupled with surface drainage and the fly are also well known truths. These facts alone without adding the unfavorable moral effects on the young and the more indirect effect on health caused by the inaccessible nature of the privy at night and in stormy weather are enough



Figure XXX—Note open manure piles with evidence of infrequent attention. These are first class breeding places for flies and harbor rodents and other vermin. Building in background is city hall.



Figure XXXI—Note open manure piles in alley. Picture taken a few blocks northwest of city hall.



Figure XXXII—Note garbage, filth and ashes. Picture taken in block bounded by Maine, Hampshire, Fifth and Sixth.

to warrant its elimination. The indictment against the privy as an enemy of health and happiness is so unquestionably established and the evidence is so completely incriminating that Quincy would be generously justified in waging a ceaseless war against this public nuisance until the last privy is banished from the city.

MILK AND FOOD.

The matter of milk and food inspection is seriously neglected in Quincy. A large part of the milk supply is not pasteurized and none of it is inspected. Food inspection is largely left to the infrequent visits of State officers. Many food products and especially fruits and vegetables are kept in open cases and along the sidewalks where they are subject to flies and insects. These products are also unprotected against careless handling, coughing, sneezing and spitting by the public.

That the production, handling and consumption of milk and food products establishes a channel through which communicable diseases may easily and rapidly pass from one person to another is scarcely to be questioned. New York City found that deaths among infants less than one year of age have been reduced from 241 out of 1,000 in 1891 to 81 in 1919. The commissioner of health credits this reduction very largely to the general pasteurization and inspection of milk that was begun in 1892. The careful supervision over food products is attended with like results. It is, therefore, of the greatest importance that a thoroughly adequate and efficient system of inspection be established in Quincy.

RATS.

The rat menace is another important feature in the prevailing sanitary conditions of Quincy. This is encouraged by the lack of rat proofing in buildings generally and especially by reason of the large number of barns and various out-houses of similar character. It is of especial importance that the matter of rat extermination and rat proofing of buildings be given serious thought at this time since a number of cases of bubonic plague have been reported recently at various gulf ports. Plague is usually transmitted by rats and other rodents and the natural course for the disease to follow would be from the gulf ports, by means of the river traffic, up the Mississippi River to the various river cities. It is, therefore, not beyond the realm of possibility for this disease to gain a footing in Quincy, and the results of such a footing under the local climatic conditions are not at all reassuring to think about.

STABLE AND MANURE.

Stables and stable manure were found in numbers sufficient to attract considerable attention from a sanitary standpoint. Altogether there are 961 stables in the city and out of this number 400 accommodate horses or cows or both. With very few exceptions manure is allowed to accumulate in the stables or else it is piled in the lot or alley and is



Figure XXXIII—Found between Fifth, Sixth, Maine and Hampshire.



Figure XXXIV—The way garbage is kept in block opposite city hall.



Figure XXXV—Another picture of "Adams Row."



Figure XXXVI—In a first ward alley.

hauled away at infrequent intervals. The most serious objection to this practice is that manure piles are the prolific breeding places of flies. During the sanitary survey flies were found in great abundance in many sections of the city and it was quite noticeable that they were especially numerous in neighborhoods adjacent to filthy dumps and insanitary stables. It was also very noticeable that flies infest the homes of the less financially able who are, above all others, less able to withstand the evil effects inaugurated by the fly pest. The only way to destroy the fly pest is to destroy the fly and that can be accomplished in no other way than to remove all breeding places that are likely to accommodate him.

GARBAGE.

The matter of garbage collection and disposal seems to be decidedly unsatisfactory. The local inspectors reported 284 instances where garbage was either thrown into the alley with rubbish, dumped into an abandoned cistern or thrown into the yard in an insanitary manner. Complaints of infrequent collections were quite general throughout the entire survey. Behind one of the leading restaurants two open barrels were kept for garbage receptacles. They were housed in a space used for preparing foods. These quarters were fairly alive with industrious flies that busied themselves with frequent trips from the garbage barrels to food articles, many of which were ready to serve. Similar conditions were true in many other places on a smaller scale. Very few places were found where garbage receptacles were properly covered and where frequent collections were made.

HOME CONDITIONS.

During the house-to-house canvass 959 conditions were reported that needed immediate attention from a sanitary standpoint. These conditions were all inclusive in character and related to matters of garbage disposal, manure disposal, insanitary privies, defective plumbing, sewage disposal, etc.

WELLS AND CISTERNS.

Fortunately Quincy has very few shallow wells, there being but 48 in all. On the other hand there are 3,659 cisterns but these become a menace to health only when the water therefrom is used for drinking purposes and then only in cases where the cisterns are not properly protected against contamination by surface drainage and other foreign substances. Several cisterns were found that were not properly protected.

GENERAL CONDITIONS.

In most of the down town business districts the merchants and apartment residents habitually keep large and unsightly piles of rubbish, often mixed with garbage, in the back lot. These seem to be largely the result of infrequent inspections since every case found by the State



Figure XXXVII—Note proximity of privy, well and dwelling. Picture of "Adams Row."



Figure XXXVIII—Note garbage and other filth scattered in alley. Picture taken in second ward.



Figure XXXIX—Note kind of stable where flies breed prolifically. Picture taken in first ward.

officials was readily corrected when the attention of the responsible people were called to it.

Vacant lots in the city serve quite often as semi-public or neighborhood dump. This practice would be all right if properly supervised. There is no objections to filling in with rubbish if it is covered with soil to prevent the breeding of insects and rodents. Garbage disposal onto these dumps ought to be strictly prohibited.

Alleys generally were found in good condition. However, a feature of importance from a sanitary standpoint is that a rather large number of open garbage receptacles were found in the alleys and a considerable number of cases where garbage was dumped outright into the alley. These conditions seem to grow up because of infrequent inspection.

Poultry yards were found in large numbers in the city. They create a sanitary problem when not properly cleaned and when garbage of a nature not suitable for poultry food is thrown into the yard. Reports of these poultry yards show that they need a closer supervision by the sanitary officer.

The local inspectors visited 8,362 premises during the course of the survey. Each of these premises was rated from a sanitary basis as good, fair or bad. Slightly more than half the homes, or 4,690 were rated as good; 2,978, or slightly more than one-third of the homes were rated as fair; 694 premises, or about 8 per cent were classed as bad. Only those premises where the general sanitary conditions were such as to warrant prompt attention and a thorough cleaning were rated as "bad."

CONCLUSION.

From the outline of conditions set forth above it is apparent that Quincy is not at present properly protected against the appearance and the spread of communicable disease. Especially is this sort of protection noticeably lacking in connection with the school system. Milk and food inspection is also seriously neglected.

The general death rate in Quincy is excessive. Compared with other similar cities and with the State and the United States it is high. The high death rate among residents under fifty years of age attracts especial interest. Nearly half of all deaths that occur in Quincy are among citizens less than fifty. That the high death rate, and especially those deaths due to preventable causes, are directly and closely related to insanitary conditions and the lack of medical care in the schools and elsewhere is not doubted.

The general sanitary conditions are somewhat below the average for cities the size of Quincy. These conditions center around the large number of outside privy vaults found in all parts of the city. Other insanitary conditions are of a nature easily corrected but the elimination of the privy vaults from Quincy will require a prolonged and determined effort. Nothing short of a ceaseless warfare will rid the city of the privy nuisance.



Figure XL—Picture taken in City Hall block.



Figure XLI—Picture taken in block bounded by Maine, Hampshire, Fifth and Sixth.

Note general insanitary conditions.



Figure XLII—Picture taken in block opposite City Hall.



Figure XLIII—Picture taken between Maine, Hampshire, Sixth and Seventh.

Conditions like these harbor rodents and disease carrying insects.

Paramount in importance is the conclusion that Quincy has already taken a long stride in the direction of solving her sanitary and health problems. That the citizens have voted upon themselves a special tax for the purpose of creating an efficient and well equipped health department is worthy of the highest commendation. Active cooperation on the part of individuals and organizations in the city is the principal factor that will determine the successful functioning of the new public health administration.

RECOMMENDATIONS.

The first and most important recommendation deals with the personnel and organization of the health department. Upon this depends, to a greater degree than upon all other factors combined, the future success of public health administration in Quincy.

The organization should include the following minimum personnel:

- (a) Commissioner of health—Physician.
- (b) Medical assistant—Physician.
- (c) Sanitary inspector.
- (d) Milk and food inspector.
- (e) Bacteriologist and chemist.
- (f) Six nurses.
- (g) Office assistant.

A man capable of efficiently discharging the duties of the office of health commissioner should be a physician trained and experienced in public health administration. He should have complete executive responsibility for all the functions and the policy of the health department.

The medical assistant to the commissioner should be a physician. He is especially essential in connection with the medical inspection and care of school children. One or more part time officials sometimes serve to advantage in this capacity.

The sanitary and the milk and food inspectors should be full time officers. Their work can be coordinated to advantage.

The bacteriologist and chemist is perhaps next in importance to the commissioner. His duties would include the analysis of milk, food and water specimens. He would also do the laboratory work connected with the diagnosis of communicable diseases.

The recommendation for six nurses is based upon the minimum personnel attached to public health organizations that are now doing creditable work in other cities. Two of these nurses should be attached to the commissioner's office while the other four would be engaged in school work. The New York City Health Commissioner recommends one school nurse for every thousand children, but with four nurses to begin the work in Quincy the health conditions among the school population ought to show a marked improvement.

SCHOOLS.

(a) Public health service in connection with schools is threefold. It suppresses and prevents epidemics of communicable disease; it cor-

rects physical disabilities such as the removal of tonsils and adenoids; it practically instructs the children in the essentials of how to keep well. It is recommended that four public health nurses and at least one physician be assigned to this important work.

(b) Pronounced beneficent results to indigent and backward pupils from dental, ocular, tonsilectomy and adenoidectomy service would seem to justify the establishment of clinics for these purposes. The recommendation is that the city install and equip these clinics and arrange with local professional men for the required clinical attention.

(c) It would seem that there are a sufficient number of pupils with tuberculosis in a quiescent stage to warrant the operation of open-air rooms. It is recommended that steps be taken to establish at least two open-air rooms. Arrangements could doubtless be made with local philanthropic agencies to furnish the additional clothing necessary in given cases while the school board would furnish the rooms and equipment.

INFANT WELFARE.

Infant welfare service is probably the most important single function of any local health department. Work in this field always results in the immediate and remarkable reduction in infant mortality.

It is recommended that three infant welfare stations be established. One of these should be centrally located; one should be held in the fourth ward near the South Park District and the third should be established in the sixth ward.

Quarters for the central station ought to be permanent and in conjunction with public health headquarters. For the other two, church or school rooms could be utilized.

ORDINANCES.

(a) It is recommended that the ordinance requiring property owners to install plumbing in their houses and connect with the sewers when accessible be revised and rigidly enforced. At present there is a laxity in the law that allows privies to be maintained on certain premises that ought rightfully to be prohibited.

(b) It is recommended that the ordinance which prohibits dumping on vacant lots be enforced.

(c) Stable manure is not properly handled to prevent fly breeding. It is strongly recommended that an ordinance be passed that will require frequent and proper disposal of manure.

(d) It is recommended that the ordinance requiring birth registration be revised to conform with the State law allowing only ten (10) days after birth instead of thirty in which to report.

COOPERATION.

(a) It is recommended that the health department encourage the close cooperation of the medical profession. This is especially necessary in the control of communicable disease and in extensive infant welfare service.

(b) It is recommended that the municipal and extra-governmental agencies cooperate closely in all public health matters.

Report of
THE DEPARTMENT OF TRADE AND
COMMERCE

From July 1, 1920 to June 30, 1921

THE DEPARTMENT OF TRADE AND COMMERCE.

GEORGE A. BARR, *Director.*

JAMES S. BALDWIN, *Assistant Director.*

FRED W. POTTER, *Superintendent of Insurance.*

WALTER E. SCHMIDT, *Chief Grain Inspector.*

JOHN G. GAMBER, *Fire Marshal.*

ROBERT F. ADAMS, *Superintendent of Standards.*

PUBLIC UTILITIES COMMISSION.*

FRANK L. SMITH, *Chairman.*

C. J. LINDLY,

P. H. MOYNIHAN,

H. W. TROVILLION,

JAMES F. SULLIVAN,

Commissioners.

JULIUS JOHNSON, *Secretary.*

JOHN D. EDMISTON, *Superintendent of Inspection, East St. Louis.*

* Name changed to Illinois Commerce Commission by act of the Fifty-second General Assembly, effective July 1, 1921.

REPORT OF THE DIRECTOR.

WILLIAM H. BOYS, *Director*.
(Resigned, effective January 20, 1921.)
GEORGE A. BARR, *Director*.
(Appointed January 20, 1921.)

The Department of Trade and Commerce comprises the following divisions, to-wit: General Office, Insurance, Fire Prevention, Grain Inspection at Chicago, Grain Inspection at East St. Louis, Public Utilities, Standards and Small Loans.

The annual report of each of these divisions follows this report, and for specific information upon any of these divisions, reference thereto may be had.

The general office is the executive office of the department, all divisions reporting their transactions thereto, and the principal transactions of each division, except as otherwise provided by law are carefully supervised there. The office of the director has been conceived to be one largely for advice and control and through the cooperation of those entrusted with the care of the several divisions, it is with creditable pride the department presents this, its fourth annual report.

This department until January 20, 1921, was presided over by the Honorable William H. Boys of Streator as its director, at which time the incoming Governor accepted the resignation of Mr. Boys at his earnest request, and the Honorable George A. Barr of Joliet was appointed to succeed Mr. Boys. James S. Baldwin, the assistant director, having been elected Circuit Judge in the Sixth Judicial District in Illinois, resigned, and his resignation was accepted by the Governor, effective June 25, 1921.

The general policies of the department heretofore obtaining have been continued and acknowledgement is hereby made to division chiefs and subordinates in the respective divisions for the very ready cooperation had in the administration of the affairs of their respective divisions, all of which has very largely contributed to the excellent showing made in a financial way during the period reported upon herein, which information may be found in the following pages.

The financial operations of the department as a whole and by divisions, for the purpose of demonstrating in a measure the efficiency with which the work of the department has been conducted, follow. The tables hereinafter presented cover the second year of the biennium. It will be noted that the department collected from all sources

\$3,000,269.04 more than was actually expended by the department, and \$2,947,825.61 more than was appropriated by the legislature for the purpose of conducting the business of the department. The appropriations, however, do not include salaries paid to State officers. An examination of the appropriations within the stated period, covered by this report discloses that from a total of \$900,130 appropriated there was saved or lapsed into the State Treasury \$54,869 or about 6 per cent. The table follows:

STATEMENT OF COLLECTIONS AND EXPENDITURES—JULY 1, 1920 TO JUNE 30, 1921.

	Collections.	Expenditures.	Balance.
General Office.....	\$ 6,725 50	\$ 20,011 36	\$ 13,285 86
Insurance.....	3,351,887 61	91,796 59	3,260,091 02
Chicago Grain.....	246,899 91	241,627 05	5,272 86
East St. Louis Grain.....	21,546 14	31,969 92	10,423 78
Fire Marshal.....	140,964 98	90,584 76	60,380 22
Utilities.....	79,931 47	379,271 89	299,340 42
Total.....	\$3,847,955 61	\$845,261 57	\$3,002,694 04

APPROPRIATION AMOUNT JULY 1, 1920 TO JUNE 30, 1921.

	Appropriation.	Expenditures.	Balance.
<i>By Standard Accounts—</i>			
Salaries and Wages.....	\$630,380	\$588,576	\$41,804
Office Expenses.....	52,025	51,815	210
Travel.....	78,200	69,152	9,048
Operation.....	4,650	3,849	801
Repairs.....	5,625	6,340	715
Equipment.....	10,500	9,037	1,463
Contingencies.....	17,000	1,227	15,773
Services, Expenses, etc.....	6,800	3,075	3,425
Valuations and Investigations.....	50,000	73,639	*23,639
Printing.....	48,250	38,551	6,699
Total.....	\$900,130	\$845,261	\$54,869

	Appropriations.	Expenditures.	Balance.
<i>By Division—</i>			
General Office.....	\$ 33,220	\$ 20,011	\$13,209
Insurance.....	98,260	91,797	6,463
Chicago Grain.....	276,580	241,627	34,953
East St. Louis Grain.....	34,170	31,970	2,200
Fire Marshal.....	100,330	80,584	19,746
Utilities.....	387,570	379,272	*21,702
Total.....	\$900,130	\$845,261	\$54,869

* Sufficient funds left from appropriation for first half of biennium to allow this deficit.

DIVISION OF INSURANCE.

FRED W. POTTER, *Superintendent.*
(Resigned, effective June 1, 1921.)

The activities of the Division of Insurance during the past year have largely been confined to the same class of business as has heretofore been reported annually to the Director of Trade and Commerce. The number of companies now operating in this State is practically the same as reported in last report, with the exception of inter-insurance exchanges which have increased practically 100 per cent.

A few companies have become insolvent during the past year and have been placed in the hands of a receiver, the most notable being the Chicago Bonding and Insurance Company of Chicago, which consolidated with the American Bonding and Casualty Company of Sioux City, Iowa; also the Mid-West Fire Insurance Company of Quincy, Illinois, a stock fire insurance company that had a very disastrous experience during the year 1920, its loss ratio having exceeded 98 per cent. Both of these companies are being wound up under the direction of the courts appointing the receivers.

Many small companies have taken advantage of the provisions of the Consolidation Act which was passed in 1919 and have either consolidated or reinsured with stronger companies thereby giving the insured the benefit of more stable insurance protection.

The department has been hampered somewhat in its examination force, it being too small to examine properly the large number of Illinois companies and take part in convention examinations of companies outside the State of Illinois. It is of importance for proper recognition of this department that it be able to participate in the examination of large companies of other states that operate in Illinois. These examinations are conducted under the direction of the chairman of the Committee on Examinations of the National Convention of Insurance Commissioners. An additional examiner, however, will be available July 1, 1921, which will give the department a chance to take part in some of these examinations in the future.

The system of issuing agents' licenses should be reformed and thereby the work of this division expedited to a considerable extent. A number of states have adopted an up-to-date system of issuing agents' licenses which relieves their departments of a large amount of work and enables them to get out the agents' licenses much earlier than is done in

this State. This division has under consideration the adoption of a system that is followed by some other states which will greatly relieve the work in this regard.

Much valuable legislation pertaining to insurance was enacted by the session of the General Assembly that has just closed. One of the most notable acts passed by the legislature is that pertaining to reciprocal or inter-insurance exchanges. Heretofore the division could only license these exchanges and had no supervision over their affairs. A complete law is now in effect in this State which gives the division the same supervision over these exchanges as it now possesses over stock and mutual companies. The act also fixes a financial standard to be maintained by such exchanges, which no doubt will result in better protection to the public insuring with these exchanges. The division also has the right under this law to go into court and prosecute the operator of any of these exchanges which does not fully comply with the law, and also has the right to go into court and close up the affairs of one of these concerns that is not properly managed.

The division is also fortunate in having good amendments drawn to the Mutual Act of this State passed in 1905. Under the old law the minimum amount of assets required was so small that many companies in operation had nothing behind them and the insuring public never knew whether or not they would receive any benefits under their policies. The law has now been so amended as to fix a financial standard that these companies must meet. Otherwise, they cannot do business.

There was also passed as a department measure a bill permitting the organization of stock automobile insurance companies to write full coverage on automobiles with a capital stock of \$200,000 fully paid in. Heretofore such companies could not be organized in Illinois while companies of other states so organized could receive a license to do business in this State. The legislature acted upon the theory that if citizens of Illinois desire to subscribe this amount of money for the operation of an insurance company of this kind, they should be given the right so to do.

The above measures were all prepared by the department and passed by the legislature upon its recommendation.

Other important legislation was passed but such measures were not regarded as departmental bills although they were not disapproved by it. A series of bills, four in number, were enacted into law that were sponsored by the Farmers Mutual Insurance Organization of this State. These are all good laws and tend for the betterment and improvement of these classes of companies. They have been operating in this State since 1865 and have the confidence of their policy holders throughout the State.

Two amendments to the Fraternal Law of this State were passed; one widening the scope of beneficiaries and the other permitting fraternal

societies doing accident and health business to pay a benefit of not to exceed \$100 for death from any cause and not requiring them to submit their members to a medical examination.

An act in relation to the promotion and organization of insurance corporations became effective July 1, 1919, and the division has had two years' experience in administering this act. It was found that it was not free from defects and accordingly a new act was prepared and passed at the 1921 session of the General Assembly. The new law makes a distinction between companies in process of organization and those already licensed to transact insurance. A separate form of subscription blank and stipulated wording to be incorporated therein has been provided for the two classes of corporations. The limitation of expense as set out in the new law applies not only to stock sold in Illinois, but also in all other states, to the end that the net surplus realized from the sale of the capital stock, which is for the equal advantage of subscribers to the stock in Illinois and in other states, may be secured on similar terms. A minimum par value of \$25 per share has been fixed in the case of insurance corporations which organize after July 1, 1921. It is also provided in the new law that the organization must have been completed and examination of capital made by the division and certificate of deposit issued within the two year period from the date of filing its declaration and charter. Formerly, if the corporation completed its organization within the two-year period it would not have to comply with the other provisions outlined above, as a new corporation will now be compelled to do.

The Standard Life Policy Provision Act passed in 1907 was amended so as to provide that the reserve on the policy, on which the surrender and non-forfeiture values are computed, should not be considered as including reserve on additional accidental death or total and permanent disability benefits included in the policy. It is generally recognized that the non-forfeiture values should not be granted under these benefits and this amendment was to remove any uncertainty in the matter. The wording of the former provision with reference to the incontestability clause was amended so as to bring the wording of this clause into harmony with the interpretation which had always been placed upon it by the Insurance Division and by the insurance departments of other states.

While the figures for 1920 are not yet available, it is indicated that the amount of life insurance written during that year will show an even greater increase over 1919 than that year did over the year 1918 and during those two years the amount of new business written was the largest in the history of insurance. The legal reserve life insurance companies of Illinois have undoubtedly contributed their share of this volume of new business and as a consequence the work of valuing the policies of the legal reserve life companies of Illinois has grown very much. As a

step towards meeting this situation, the system of valuation was changed from the former method of valuing each individual policy separately to a "group" system. When this system shall have been completely installed there will be a considerable saving in time and in clerical work although with the future growth in business and the increase each year in the number of legal reserve life insurance companies chartered under the laws of this State, an increase in the clerical force will also be necessary.

On June 30, 1921, there were 46 insurance corporations which had deposits of securities with the Division of Insurance. Forty-one of these are companies organized under the laws of the State of Illinois and five are companies of other states whose deposits are required by the reciprocal provisions of the laws of this State.

Included in the 41 Illinois corporations, there are 22 legal reserve life insurance companies, five of which also do the business of accident and health insurance and five that register all their policies and deposit securities covering the reserve thereon.

Eight deposits are made under the Casualty Act, five being those of livestock, one of liability, and two of accident and health insurance companies.

The only Illinois company which engaged in the surety business is in the hands of a receiver. Its deposit remains with the department.

Our laws do not require deposits of assessment companies, fraternal societies or mutual companies, but 10 of such organizations maintain deposits.

The total deposits, par value, approximate twenty-five millions, and increase at the present time at the rate of about two millions yearly.

During the calendar year 1920 the approximate deposits were six millions and the withdrawals four millions.

During the period reported on an important matter transpired which originated in this division years ago, and it is believed of sufficient importance to make a detailed statement as a matter of record.

METROPOLITAN LIFE INSURANCE COMPANY CASE.

During the early part of 1919, the Division of Insurance levied a tax against the Metropolitan Life Insurance Company of New York in the sum of \$99,758.99 under the Retaliatory Tax Law then in force in this State. This tax was based upon the gross premiums collected by the insurance company in this State during the year 1918. It was claimed by the insurance company that upon a proper construction of our retaliatory tax laws, it paid to the State of Illinois, during the years 1902, 1903 and 1904, a total sum of \$60,148.61 in excess of the amount legally due from it. The company, therefore, demanded that it be given credit on the tax assessed in 1919 for the amounts claimed to have been illegally assessed and collected in 1902, 1903 and 1904, together with

interest on the sum paid in each year from the time such payments were made.

For various reasons the department declined to allow the credits demanded.

In June, 1919, the company paid to the department *under protest* the tax as assessed and at the same time filed in the Circuit Court of Sangamon County a petition for a writ of mandamus, commanding the Director of this department to allow the credits as demanded. Upon the filing of this petition, a temporary writ of injunction was issued, restraining the Director from paying into the State Treasury the amount so paid under protest.

A hearing in the Circuit Court resulted in the peremptory writ prayed for being granted, and the Director was ordered to give the company credit on the 1919 assessment for the amounts claimed to have been illegally collected in 1902, 1903 and 1904, together with interest on each payment, from the time it was made at the rate of 5 per cent per annum. Under this order, the credits directed to be given would have equalled, and probably would have exceeded, the total amount of the 1919 assessment. The case was taken to the Supreme Court on appeal, and at the December term, 1920, a decision was handed down, reversing the judgment of the Circuit Court of Sangamon County and holding, in substance, that the insurance company was not entitled to the credits demanded. A petition for a rehearing was filed, and this petition was denied at the February term of the court, and Mr. Boys, who had severed his official connection with the department, upon receipt of a certified copy of the opinion, and of the further order of the Circuit Court of Sangamon County in the premises, turned over to the State Treasurer the amount paid under protest by the Metropolitan Company, together with three per cent interest on said sum, compounded semi-annually, from the time it was received by him. This case is an important one, not only because of the large amount involved, but because of the influence it will have upon the claims of other insurance companies where payments are claimed to have been made under somewhat similar circumstances.

FINANCIAL REPORT.

Herewith is submitted the financial report of the division for the year ending June 30, 1921. There has been a marked increase in the amount collected for privilege tax. While last year's report showed the actual collections to be \$3,199,128.28, it did not represent what would be a normal collection for one year or the amount that would be produced by one assessment. The act in relation to the taxation of non-resident corporations, companies and associations provided that an assessment be made in August, 1919, which, after certain deductions, netted \$1,553,835.79 before the end of 1919. It also provided that an assessment be levied on or before May 15, 1920, and from this assess-

ment \$1,637,342.49 was received before July 1, 1920. These two, combined with the initial license fees collected, \$7,950, made the total \$3,199,128.28, or the amount realized from this source between July 1, 1919, and July 1, 1920.

The approximate amount realized from the assessment made in May, 1920, was \$2,320,000 and the amount that will be received from the assessment made in May of this year will be something over \$2,900,000, or an increase of about \$580,000.

There was also a marked increase in the Fire Marshal Tax, last year's being \$110,817.75 and this year's \$140,964.98.

The fees of the division in some instances have increased, but not to such a marked degree as the taxes.

The following table indicates the nature, source and amount of collections by this division for the year ending June 30, 1921:

Agents' certificates (fire and casualty).....	\$ 103,289.00
Agents' certificates (life).....	25,993.00
Certificates of compliance, deposit and valuation.....	1,768.75
†Examinations.....	12,973.00
Registering policies.....	13,745.50
Filing statements (fire and casualty).....	7,385.00
Filing statements (life).....	1,905.00
Privilege tax.....	3,017,627.73
Fire Marshal tax.....	140,964.98
District, county and township mutuals.....	236.00
Special agents, surplus lines.....	1,633.13
Assessment associations filing statements.....	1,554.00
State licenses (reciprocal).....	2,487.00
Lloyds and inter-insurers (certificates).....	594.00
Valuing insurance.....	18,890.87
Charters filed.....	1,320.00
*Protested taxes.....	22,827.70
Miscellaneous fees.....	4,170.91

Total \$3,379,365.62

† Included in the amount "Examinations" is \$128.53, representing a payment made by the Mid-West Fire Insurance Company. The check was returned "Protested" for the reason that the company had been placed in the hands of the receiver. The receiver refused payment and as a result the amount was not included in the remittances to the State Treasurer during the period.

* The amount included above, \$22,827.70, represents taxes paid under protest and was not turned into the State Treasury at the time it was collected, but was held by William H. Boys, former Director, until the Supreme Court handed down an opinion in favor of the State. There was in addition to this amount, \$106,748.24 not included above, having been paid in former years under protest, which was also released by court decision or withdrawal of protest. These two amounts, together with interest amounting to \$6,867.26, or a total of \$136,443.20, were turned over to the Treasurer direct by William H. Boys, through the General Office of the department.

With these modifications, it will be seen that the actual amount paid to the State Treasurer, or credited as payments from this division, was \$3,492,825.59 during the fiscal year ending June 30, 1921.

DIVISION OF FIRE PREVENTION.

JOHN G. GAMBER, *Fire Marshal.*

During the calendar year 1920, fire losses in the United States reached an estimated total of a half billion dollars, which is the largest annual loss on record except in the year of the San Francisco conflagration in 1906. In Illinois the upward trend was marked, as in all other states, and the fire loss for the calendar year 1920 was \$20,175,422, which is the largest annual loss on record in this State.

The Illinois loss for the fiscal year covered by this report, ending June 30, 1921, was approximately the same, \$20,007,135.

Annual fire losses in Illinois since 1912, which is the first year for which complete records are available, are as follows:

Year.	No. fires.	Loss.
1912.....	9,092	\$11,240,540
1913.....	8,432	13,666,438
1914.....	11,605	15,353,847
1915.....	12,450	11,798,569
1916.....	15,693	13,485,083
1917.....	14,655	12,771,570
1918.....	11,651	12,542,034
1919.....	13,135	14,544,026
1920.....	14,167	20,175,422

It will be noted that a downward trend was shown in 1917 and 1918. These were the years when the United States was in the World War, when every effort was made to conserve resources from waste and when war demands made business so good that business men and manufacturers were taking all precautions to guard themselves from loss by fire. The upward trend was noted in 1919, and was probably due in that year more to inflated values than to a real increase in losses, but the large increase in 1920 indicates a real jump in losses, due probably to the break in prices and business depression, of which more will be said presently.

Figures in the above table cover calendar years in order to facilitate comparison, since it was not until 1917 that reports were required by fiscal years under provisions of the Administrative Code. Reports for the fiscal years show the same upward trend, beginning in 1919. They are:

Year.	No. fires.	Loss.
1917-1918.....	12,636	\$12,208,060
1918-1919.....	11,693	13,240,326
1919-1920.....	14,052	16,552,248
1920-1921.....	12,327	20,007,135

CAUSES OF LOSS INCREASE.

It has been said that, "when prices go down, fires go up." In my report last year I stated that a serious situation as to fire losses was

likely to develop if there were a radical drop in prices, and such a situation did develop when the bottom dropped out of prices.

The tremendous rise in prices during the latter part of the war and for about a year and a half afterwards put values on an inflated, artificial basis which could not endure. When prices slumped and industrial depression came, factories, warehouses and stores held goods which had depreciated below cost prices, with no chance of a rising market to permit recouping of losses. In fact, the public was on the so-called "buying strike," the result of which was to depress business and prices still further. Owners of stocks whose assets were not sufficient to enable them to charge off their losses and start at the new levels, faced ruin. Many factories, which had sprung into existence to meet a war-time demand, became a dead load because they no longer had a market. Speculators, who had bought heavily on a rising market with the intention of "unloading" when prices had been forced still higher, found the banks tightening up on credit, which forced them to let go of their stocks and take their losses.

The important part of the situation so far as fire losses are concerned is that fire insurance was increased to cover inflated values during the high price period and, when the break came, most of the insurance was in force at the high levels.

A newspaper in a neighboring state contained a fire sale advertisement which stated the situation rather aptly, even though inadvertently, and with a humor not intended:

"We, like every other clothing store in the city, were 'loaded to the guards' with merchandise for which we paid much money. Many worried hours had been spent in a vain effort to 'unload' without too great a loss. The wholesale markets were offering us new merchandise way below what we paid for stock. We could not buy because we were loaded already. What to do was the problem. Then along came the fire."

In the cotton belt of the south fires were so numerous after cotton prices fell that adjusters could not arrange loss adjustments inside of two or three weeks. After the collapse of the silk market, more than twenty silk mills or factories burned out or had fires within a few months in Patterson, New Jersey, alone. Lines of clothing, women's ready to wear, furs, burlap and bagging all showed abnormal increases in loss ratio after the fall in prices. In fact, it would be hard to show any business which was affected by the adverse turn in the market which did not show an increased loss ratio. This was the situation the country over. The same trend was reflected in the Illinois losses and no doubt accounts largely for the increase last year.

No reflection is intended upon the business men of this State or Nation as a class. There is always a percentage of men, in and out of business, who will commit crime for profit, and this percentage seems to be larger in times of stress than at other times. Not all of the suspicious losses can be set down as incendiary. A great many of them are ascribed to unknown causes, because the destruction was complete enough to destroy any clue as to the possible origin of the fire. Nevertheless, suspicious fires, occurring in so many lines after the price break was felt, would seem to be more than a coincidence.

It is also a fact that a large number of fires have been due directly to depressed business conditions, but were not necessarily incendiary. Carelessness is responsible for most accidental fires. When a man's business is on the rocks and he faces nothing but losses, he is likely to become despondent and lose his usual interest in keeping up his place. He becomes careless. Fire hazards accumulate and he is likely not to care much about them, especially if he is well insured.

DISASTERS OF THE YEAR.

Two disasters occurred during the year, both of them being explosions in the city of Chicago in March. They were:

Grain elevator, owned by Chicago and Northwestern Railroad Company and occupied by the Armour Grain Company, March 19, 1921. Six killed. Property damage, \$1,000,000 to building and \$1,000,000 to contents.

Singer and Schaffer fireworks explosion, March 29, 1921. Six killed, 73 injured.

The Armour elevator was the largest of its kind in the world, having a capacity of 10,000,000 bushels and containing about 6,000,000 bushels at the time of the explosion. It was regarded as of the finest approved type of construction, being built of steel and reinforced concrete. The roofs of the bins were built as lightly as possible, in line with the theory that they would give way and dissipate the force of the blast in case of explosion. The blast was so terrific, however, that it literally blew the massive structure to pieces.

It is the opinion of the Fire Marshal that the cause of the explosion was grain dust suspended in the air, which is the most serious hazard of all grain elevators. If mixed in the right proportions with air, a spark will set it off. Just what set off the explosion in this case could not be determined by the investigation. The explosion occurred on a Saturday afternoon between 5:30 and 6 o'clock. No machinery had been operated since noon and the only persons in the elevator during the afternoon were a few employees working around the driers. The steam in the driers was shut off about 4 o'clock, at which time the night shift whose

duty it was to clean out dust accumulation went to work. It was these men who lost their lives.

While officers and employees of the Armour Company denied the testimony, a number of painters, not in the employ of the company, testified as to dust accumulations on beams, in and around the driers, and in the pits. They stated that this dust interfered seriously with their painting. They also stated that they were required to use extension electric cords in their work, that these were short-lived, wore out frequently and that they often received shocks in using them. Both the night and day shifts found it necessary to use these extension cords to get light for their work. It is probable that the night men were working in and about the driers and pits, where dust accumulations were thickest, that some time during the operation a defective cord either caused an employee to drop a light, breaking the globe, or caused a short circuit. Either would have been capable of setting off the suspended dust. This is borne out by the fact that the main explosion apparently occurred in and about the driers and pits near the train sheds and traveled both from the top and lower runs of the main elevator, the two waves meeting in the far end of the elevator and causing a second explosion, entirely destroying that end of the structure.

The investigation developed that, although the force of cleaners had been reduced and was insufficient, an elevator of this size is entirely too large for any force of men to keep cleaned of dust, even though modern devices for collecting and removing dust are also employed, as in this case. It also developed that a large amount of dust is needlessly introduced into elevators when grain is unloaded from grain cars. This could be avoided by passing an air suction process over the cars before unloading, but rulings of most of the middle west states prohibit this in order to protect the farmer in getting full weight for his grain.

The Singer and Schaffer explosion was caused by a careless workman dropping a case of torpedoes to the pavement while unloading a truckload of torpedoes in the rear of their place of business. There were 153 cases of torpedoes in the shipment. An analysis showed that each torpedo contained from eleven to sixteen grains of a compound of gunpowder, saltpeter and other ingredients necessary to cause explosion by friction or force of contact. Each case contained fifteen gross of torpedoes and the amount of explosive contained in the entire shipment was between six hundred and nine hundred pounds. The analyses showed the explosive force of the powder used in the manufacture of these torpedoes to be 96,000 pounds to the square inch.

The explosion rocked the entire district, which was in the thickly populated west side, and did thousands of dollars worth of damage to property.

Storage of explosives as here disclosed is in direct violation of State law and city ordinance of Chicago. Singer and Schaffer apparently were conducting a general merchandise and notion business. The investigation showed that a city inspector found illegal storage of fireworks there in 1920 and ordered its removal; that the building was closed in May, 1920, for non-compliance with the order; that on May 29, 1920, the business was allowed to reopen, with the understanding that the fireworks and explosives had been removed; but that such illegal storage was continued. It also developed that salesmen for the company stored quantities of these torpedoes and fireworks in their homes in various parts of Chicago. In one instance ten cases of torpedoes were found stored within four feet of a furnace in a home where several families reside, in a closely populated district.

The coroner's jury recommended that Singer and Schaffer be held to await grand jury action on a charge of manslaughter. This office and the Fire Attorney of Chicago jointly presented the matter to the State's Attorney of Cook County and urged immediate action.

The Fire Marshal personally conducted the investigation of both explosions.

The present statute on explosives is scarcely sufficient to control shipment and storage of explosives of the kind which caused the Singer and Schaffer explosion. It is entirely inadequate for controlling storage and sale of fireworks in localities where such storage and sale is not expressly permitted by local authorities. It is recommended that a law be passed prohibiting the sale of torpedoes of this character anywhere within the State and it is further recommended that legislation be considered, with the end in view of eliminating the sale and use of fireworks altogether, except public displays in charge of experts.

HUMAN TOLL OF THE FIRE LOSS.

The most tragic side of the fire loss is the tremendous number of deaths and injuries. It is only in the last few years that efforts have been made to tabulate these and the surprising estimate has been made that approximately twenty thousand persons lose their lives from fire or burns annually in the United States.

Statistics kept by this division show that no less than one hundred and fifty-two persons died and three hundred and fifteen were injured in this State during the last fiscal year, including the victims of the two Chicago explosions. The number is no doubt considerably larger than our figures show, as the statute does not require the reporting of casualties and we have to depend on newspaper clippings and such voluntary reports as we may receive from local officials.

Following is the record of casualties by months:

DEATHS.

Year.	Month.	Babes and Children.	Youths and middle aged.	Aged people.	Total.
1920.....	July.....	5	9	2	16
	August.....	1	6	1	8
	September.....	1	1		2
	October.....	4	12	1	17
	November.....	4	10	4	18
1921.....	December.....	11	9	1	21
	January.....	7	5	2	14
	February.....	1	11	1	13
	March.....		13		13
	April.....	5	1		6
	May.....	4	7	1	12
	June.....	7	5		12
	Total.....	50	89	13	152

INJURED.

Year.	Month.	Babes and children.	Youths and middle aged.	Aged people.	Total.
1920.....	July.....	7	24		31
	August.....	4	14		18
	September.....	4	6		10
	October.....	2	17		19
	November.....	5	23	1	29
	December.....	3	18		21
1921.....	January.....	12	18		30
	February.....	1	29		30
	March.....	25	64		89
	April.....	5	5		10
	May.....	2	16		18
	June.....	3	7		10
	Total.....	73	241	1	315

Only a comparatively small number of these casualties were the result of burning buildings. Such things as starting fires with kerosene or gasoline, use of gasoline or benzine for cleaning in the home, children playing with matches or around bonfires, smoking or striking matches while filling automobile with gasoline, clothes catching fire from open fires—these and similar causes are responsible for most of the human toll.

It is the loss of life rather than the loss of property which is awakening the people to a realization of the terrible toll of fire. Property can be insured and replaced in most cases, but a life once snuffed out is gone and permanent injuries cannot be repaired. Carelessness and negligence are responsible for practically every death and injury. This division is engaged in a continuous publicity campaign in an effort to educate the public to careful habits.

INVESTIGATIONS.

The work of the division is divided into two main branches: First, investigation of suspicious fires with the purpose of apprehending those responsible for criminal fires, and, second, inspection of property

throughout the State, with the purpose of ordering the removal of fire hazard conditions and thereby preventing fires.

The great increase in losses due to suspicious fires has been gone into at some length in the forepart of this report. There is no doubt but that there has been an increase in incendiarism because of the abnormal conditions which have existed. A crime wave has been general over the country and it would be surprising if burning property for the purpose of collecting insurance were not practiced at a time when all sorts of criminal methods have been used to secure money.

The principal cause of burning for profit is overinsurance, aggravated by quick adjustments. If the crook could not secure an abundance of insurance, he would have no object in burning. If he had to wait for his money until time had been given for an exhaustive investigation, he would be apt to ponder longer before setting a fire.

When prices dropped, overinsurance was automatically brought about, because insurance did not drop with values. In crooked fires as we meet them in our routine work, overinsurance is usually found.

In a case now under investigation, a man had about \$25,000 insurance on a building worth approximately that much. He had a fire, which, while suspicious, did little damage and presented no tangible evidence on which to work. He then placed new insurance on his building totaling about \$45,000 and within two months had another fire, during which about twenty gallons of gasoline and kerosene were removed from different rooms.

We find that local insurance agents are often careless in writing insurance, paying little or no attention to the values they are covering and sometimes to the character of the party who is asking for the insurance.

In one of our recent investigations we found that a notorious firebug had acquired a certain piece of property. The insurance agent would not write insurance in the name of the firebug's son, whereupon the property was transferred to another party and insurance was written shortly thereafter by the same agent. The property burned a little later and the facts as stated were learned.

In one town we found an agent who made a practice of writing policies without solicitation, placing the coverage at what he thought the property ought to stand and mailing the policies to the owners, who could return them or remit the premium, as they saw fit. He did this without ascertaining whether there was other insurance already in force, the result being the creation of overinsurance where such other insurance was in effect.

We sometimes find agents who will write insurance upon application by telephone, taking the word of the party at the other end of the line as to values, although they may not know who he is.

The agents do not mean to play into the hands of firebugs, but are interested in the size of their commissions, which, of course, are governed by the size of the policies.

Quick adjustments are a handicap to the investigation of fires. It is practically impossible to convict a man before a jury after the loss has been paid, as the jury is likely to presume that the insurance company must have been satisfied with the loss or it would not have paid it. Unless we are able to develop an open and shut case at the outset of an investigation, it is often difficult to hold off an adjustment, especially if the assured, because of the fact that he is being investigated, is willing to reduce his claim substantially. In the case cited above, where 20 gallons of oil were removed from a fire after the insurance had been raised from \$25,000 to \$45,000, we were reliably informed that the companies planned to settle, the idea being to swallow the loss, which happened to be small, and get off the risk before there might be another fire. Through prompt action by the division, payment was held up, while the companies got off the risk by cancelling the policies.

These are evils and abuses of insurance, the rectification of which will do more to prevent crooked fires than any other one thing. They are due to a considerable extent to competitive conditions among the companies. Local agents are in strong competition to get business. The companies do not want to get a reputation of trying to avoid payment of losses. There are indications that the companies are trying to get away from these evils and it is to be hoped that a practical way will be found.

Following is the record of the investigation activities of the division for the year:

Number of fires investigated.....	1,000
Number of arrests made.....	30
Number of persons indicted.....	26
Number of persons convicted.....	11
Number of persons acquitted.....	1
Number of indictments nolle prossed.....	3
Number of untied cases.....	11
Number of cases dismissed.....	9
Number of "no true bills" returned by the grand jury.....	1

Some of the recent fires of suspicious origin have earmarks of being the work of an organized arson ring. The division has developed some well defined leads, which of course cannot be disclosed, but investigators are quietly building up evidence which is expected to be sufficient in a short time to end the activities of the gang and convict its leaders.

INSPECTIONS.

The inspection branch of the division was under handicap during the entire year because of the Supreme Court decision holding section 9 of the Fire Marshal Act unconstitutional. It was this section which gave the division the right to inspect buildings and order the removal of hazards. As a result, while we continued to make the regular inspections and issue orders or recommendations, we were powerless to enforce them except through persuasion.

In view of the conditions, it is gratifying that approximately the same number of inspections were made and approximately the same number of compliances secured as in the previous year.

It should be noted that the Supreme Court decision did not affect the authority of the division as to fire escapes, exit doors of public buildings and hazards of volatile oils, all of which are covered by specific statutes. Innumerable improvements have been made as to exit facilities and fire escapes on public buildings as a result of the division's activities.

During the year rules governing the use, storage and sale of volatile oils were adopted under authority of the statute passed by the Fifty-first General Assembly. At this time rules applying specifically to garages are being prepared.

The Fifty-second General Assembly amended section 9 with the idea of overcoming the Supreme Court's objections. The amendments give the property owner the right of appeal to the Fire Marshal and the further right to appeal from the Fire Marshal to the County Court. The County Court may sustain, modify or set aside an order and the decision of the court is final. The amendments also give the division the right to condemn buildings which are unsafe from any cause, a right which was not entirely clear under the old law.

The most notable fire prevention achievement of the year was the Gallatin County court house case at Shawneetown. This historic old building is one of the relics of the Lincoln-Douglas debates. An inspection by the division showed the building in a state of decay and disclosed that valuable and historic records were given no protection whatever against fire. These records involved practically all the territory south of the Baltimore and Ohio Railroad.

An order was issued to repair the building and provide fireproof vaults for the records. Half the county board of supervisors resisted the order and no action was taken to comply. The Fire Marshal asked the Supreme Court for a writ of mandamus to compel the board to act and perform its statutory duty. After a battle, the writ was issued and the board of supervisors has complied with the order.

The defense entered a demurrer, attacking the authority of the Fire Marshal in issuing the order. The court held that the duty of the board to keep public buildings fit for the uses declared by law is mandatory and that any citizen of the State at large has the right to petition for a writ of mandamus to compel performance of that duty. The court also assessed costs of the suit against the members of the board who resisted the order, holding that they had committed a breach of duty in so doing.

These two features are very important, as they provide a way to require recalcitrant school boards and other bodies of public officials to provide statutory requirements in the way of fire escapes, exit doors, etc.

In face of the large fire loss, it is difficult to gauge the results of fire prevention work. Abnormal conditions entered into the loss and there were a few large individual losses which boosted the total, such as the \$2,000,000 Armour grain elevator explosion and the \$350,000 oil tank fire at Lawrenceville, caused by a bolt of lightning. Lightning caused the unreasonable loss of \$1,254,628, although lightning losses can be practically eliminated by proper protection.

Almost two-thirds of the loss in the entire State occurred in the following five classifications:

Factories	\$3,887,217
Dwellings	3,333,529
Stores	2,486,143
Barns and stables	1,629,192
Garages	1,121,183
Total	\$12,457,264

It is hardly practical for this division to undertake inspections of dwellings, which is a matter that should be controlled by local ordinances and local officials, but special attention is needed in the other classifications. With the additional deputies provided by the Fifty-second General Assembly we expect to increase the scope of our activities effectively.

We hope to make a working agreement with the Factory Inspection Division whereby deputy factory inspectors will give attention to fire hazards in factories or notify this division of any serious fire hazards they find.

Following is a summary of the inspection activities:

Year.	Month.	Towns visited.	Inspections.	Buildings removed.	Prosecutions and fines.
1920.....	July.....	117	4,015	31	-----
	August.....	109	3,114	17	2
	September.....	137	3,872	23	1
	October.....	61	3,440	34	3
	November.....	108	3,099	31	1
	December.....	104	3,901	45	-----
1921.....	January.....	127	3,229	10	4
	February.....	101	2,590	27	-----
	March.....	113	2,382	28	-----
	April.....	171	4,030	22	-----
	May.....	150	5,088	35	1
	June.....	187	4,205	18	-----
Total.....		1,485	42,965	321	12

EDUCATIONAL ACTIVITIES.

It has long been argued that education of the public is the real hope of fire prevention and that the place to begin education is in the schools. Cooperating with the Chicago Association of Commerce, the Fire Marshal appointed a junior fire marshal in each of a score of Chicago high schools. The results were remarkable. The boys organized and directed fire drills, made daily inspections of buildings, halls and exits, caused hazards to be removed from school buildings, conducted surveys of the

school districts with the aid of the civics classes, caused the school dramatic clubs to give fire prevention plays, gave talks on fire prevention and wrote fire prevention articles for the school papers. Printing classes in some schools turned out literature for posting and distribution. Most of the boys appointed a staff of assistants to have charge of the different phases of the work. At the close of the school year a medal was given to each junior.

The plan was so successful that it will be continued during the coming school year and extended throughout the State. Only a few down State schools were reached last year.

Fire Prevention Day in 1920 was marked by the issuance of a proclamation by President Wilson, the first time a presidential proclamation was issued. The Fire Marshal of Illinois, who was president of the Fire Marshals' Association of North America, was instrumental in securing this proclamation. The usual Governor's proclamation was issued in Illinois and a state-wide observance followed. Fire Prevention Day in 1921 will mark the fiftieth anniversary of the Chicago fire and a greater observance than ever is planned.

During the year the usual educational work of the division has been carried on by means of public addresses by the Fire Marshal and by articles in the press and magazines, bulletins, pamphlets and printed cards.

THE STATISTICAL RECORD.

PROPERTY LOSS—AGGREGATE VALUE OF BUILDINGS AND PERSONAL PROPERTY SHOWING INSURANCE THEREON AND TOTAL DAMAGE BY FIRE IN THE STATE OF ILLINOIS FROM JULY 1, 1920 TO JUNE 30, 1921.

Total value of buildings, in which fires have occurred.....	\$106,763,835
Total damage to said buildings.....	10,555,009
Total insurance on said buildings.....	57,116,235
Total value of personal property jeopardized by fire.....	64,792,219
Total damage to said personal property.....	9,452,126
Total insurance on said personal property.....	39,320,735
Total fire loss in the entire State of Illinois.....	20,007,135
Total number of fires in the entire State of Illinois.....	12,327

AGGREGATE VALUE OF BUILDINGS AND PERSONAL PROPERTY SHOWING INSURANCE THEREON AND TOTAL DAMAGE BY FIRE OUTSIDE THE CITY OF CHICAGO FROM JULY 1, 1920 TO JUNE 30, 1921.

Total value of buildings, in which fires have occurred.....	\$34,275,895
Total damage to said buildings.....	7,538,904
Total insurance on said buildings.....	17,681,625
Total value of personal property jeopardized by fire.....	19,629,419
Total damage to said personal property.....	6,200,331
Total insurance on said personal property.....	11,111,150
Total fire loss outside the City of Chicago.....	13,739,235
Total number of fires outside the City of Chicago.....	6,329

AGGREGATE VALUE OF BUILDINGS AND PERSONAL PROPERTY SHOWING INSURANCE THEREON AND TOTAL DAMAGE BY FIRE IN THE CITY OF CHICAGO FROM JULY 1, 1920 TO JUNE 30, 1921.

Total value of buildings, in which fires have occurred.....	\$72,467,940
Total damage to said buildings.....	2,016,105
Total insurance on said buildings.....	39,434,610
Total value of personal property jeopardized by fire.....	45,162,800
Total damage to said personal property.....	3,251,795
Total insurance on said personal property.....	28,209,585
Total fire loss in the City of Chicago.....	6,267,900
Total number of fires in the City of Chicago.....	5,998

**NUMBER OF FIRES AND THE LOSS THEREFROM IN THE ENTIRE STATE OF ILLINOIS
FOR EACH MONTH FROM JULY 1, 1920 TO JUNE 30, 1921.**

Month and year.	Number of fires.	Fire loss.	Month and year.	Number of fires.	Fire loss.
July, 1920.....	1,003	\$1,327,601	February, 1921.....	1,087	\$1,736,632
August, 1920.....	916	1,545,098	March, 1921.....	957	3,426,289
September, 1920.....	904	1,187,992	April, 1921.....	863	957,984
October, 1920.....	1,006	1,459,909	May, 1921.....	950	1,164,483
November, 1920.....	1,302	2,119,148	June, 1921.....	816	889,644
December, 1920.....	1,193	2,410,443			
January, 1921.....	1,330	1,781,942	Total.....	12,327	\$20,007,135

**NUMBER OF FIRES AND THE LOSS THEREFROM IN THE STATE OF ILLINOIS OUTSIDE
THE CITY OF CHICAGO FOR EACH MONTH FROM JULY 1, 1920 TO JUNE 30, 1921.**

Month and year.	Number of fires.	Fire loss.	Month and year.	Number of fires.	Fire loss.
July, 1920.....	503	\$1,047,731	February, 1921.....	636	\$1,425,627
August, 1920.....	427	1,243,068	March, 1921.....	576	1,214,349
September, 1920.....	404	944,747	April, 1921.....	499	760,469
October, 1920.....	408	830,634	May, 1921.....	483	904,883
November, 1920.....	648	1,653,848	June, 1921.....	377	537,539
December, 1920.....	609	1,961,228			
January, 1921.....	749	1,146,122	Total.....	6,329	\$13,739,235

**NUMBER OF FIRES AND THE LOSS THEREFROM IN THE CITY OF CHICAGO FOR EACH
MONTH FROM JULY 1, 1920 TO JUNE 30, 1921.**

Month and year.	Number of fires.	Fire loss.	Month and year.	Number of fires.	Fire loss.
July, 1920.....	500	\$ 279,870	February, 1921.....	451	\$ 301,005
August, 1920.....	489	302,040	March, 1921.....	381	2,211,910
September, 1920.....	500	243,245	April, 1921.....	364	197,485
October, 1920.....	598	599,275	May, 1921.....	457	259,600
November, 1920.....	654	465,300	June, 1921.....	439	352,105
December, 1920.....	584	419,215			
January, 1921.....	581	636,820	Total.....	5,998	\$6,267,900

**CLASSIFICATION OF THE FIRE LOSS IN THE STATE OF ILLINOIS, GIVING THE
NUMBER OF FIRES AND THE LOSS, CLASSIFIED ACCORDING TO CAUSES, JULY
1, 1920 TO JUNE 30, 1921.**

Cause.	No.	Damage.
1. Chimneys, flues, cupolas and stacks, overheated or defective.....	845	\$ 994,817
2. Conflagrations.....	35	105,160
3. Electricity (except electric irons and similar small devices).....	529	888,632
4. Explosions.....	155	2,457,870
5. Exposure.....	811	1,079,622
6. Fireworks, fire crackers, balloons, etc.....	52	28,041
7. Friction, sparks occasioned by running machinery.....	24	452,525
8. Gas, natural and artificial.....	268	223,285
9. Hot ashes and coals, open fires.....	285	112,494
10. Hot grease, oil, tar, wax, asphalt (ignition of).....	108	87,055
11. Hot irons, including electric devices.....	102	58,076
12. Incendiarism.....	201	240,190
13. Lightning, buildings rodde.....	12	16,035
14. Lightning, buildings not rodde.....	322	1,238,593
15. Matches, smoking.....	1,693	677,126
16. Miscellaneous, cause known, but not classified (for unknown see No. 27).....	127	135,293
17. Open lights.....	190	65,113
18. Petroleum and its products.....	416	221,295
19. Rubbish and litter.....	376	91,730
20. Sparks, arising from combustion (other than 23).....	188	388,639
21. Sparks, on roofs.....	2,353	794,191
22. Spontaneous combustion.....	406	910,404
23. Steam and hot water pipes.....	15	12,650
24. Stoves, furnaces, boilers and their pipes.....	752	537,693
25. Unknown.....	1,621	6,604,801
26. Unknown origin, but investigation important.....	441	1,558,015
	12,327	\$20,007,135

CLASSIFICATION OF THE NUMBER OF FIRES AND THE LOSS THEREFROM, LISTED
ACCORDING TO THE PROPERTY DESTROYED JULY 1, 1920 TO JUNE 30, 1921.

Class of property.	No.	Damage.
1. Apartment houses, flats and rooming houses.....	1,426	\$ 373,217
2. Amphitheatres, grand stand, etc.....	3	2,010
3. Bakeries.....	46	56,347
4. Barber shops.....	21	12,444
5. Barns and stables (not liveryes).....	950	1,620,192
6. Churches.....	63	116,807
7. Depots, stations, waiting rooms, etc.....	16	18,775
8. Dry cleaning establishments.....	20	10,022
9. Dry houses, kilns, rooms, etc.....		
10. Dwellings.....	5,125	3,333,539
11. Elevators and grain warehouses.....	16	2,383,062
12. Factories.....	461	3,887,217
13. Foundries.....	34	116,920
14. Garages.....	456	1,121,183
15. Granaries.....	49	101,267
16. Green houses.....	1	25
17. Halls, (lodge) (club) (dance) (public) etc.....	59	203,033
18. Hotels and boarding houses.....	86	67,033
19. Hospitals.....	9	3,225
20. Ice houses.....	24	98,622
21. Jails.....	1	25
22. Laundries.....	25	13,200
23. Liveryes.....	5	6,080
24. Mills (flour).....	7	201,910
25. Mills (saw and planing).....	5	7,200
26. Office buildings.....	49	112,334
27. Oil houses.....	1	225
28. Photo studios.....	1	5
29. Power houses, pump houses and engine houses.....	15	15,270
30. Restaurants.....	102	72,585
31. Saloons.....	26	7,425
32. Sheds.....	800	106,799
33. Smoke houses.....	30	3,260
34. Silos.....	8	3,150
35. Stores.....	1,012	2,486,143
36. Shops, (carpenter, blacksmith, etc.).....	186	182,637
37. Schools (colleges, seminaries, etc.).....	69	596,514
38. Theatres and motion picture houses.....	20	40,700
39. Warehouses.....	124	753,668
40. Miscellaneous.....	126	143,865
FIRES OTHER THAN BUILDINGS.		
1. Automobiles.....	525	96,747
2. Boats.....	5	17,875
3. Bridges.....	9	28,210
4. Cars, (railway) (electric) etc.....	144	312,124
5. Docks, (coal) etc.....	6	171,035
6. Fences.....	20	226
7. Grain and hay.....	67	17,107
8. Junk yards.....	7	6,450
9. Lumber yards.....	15	18,576
10. Tanks (water), etc.....	6	358,310
11. Tents.....	9	220
12. Threshing outfits.....	6	3,655
13. Trestles.....	4	3,560
14. Wagons.....	20	380
Mine tipples.....	4	57,500
Aeroplanes and hangars.....	2	127,000
Packing plant.....	1	443,225
	12,327	\$20,007,135

NUMBER OF FIRES AND THE LOSS THEREFROM OCCURRING IN THE STATE OF ILLINOIS JULY 1, 1920 TO JUNE 30, 1921.

	Number.	Damage.		Number.	Damage.
Adams.....	93	\$ 255,010	Livingston.....	61	93,162
Alexander.....	82	60,750	Logan.....	40	111,766
Bond.....	27	29,295	Macon.....	103	271,613
Boone.....	26	28,490	Macoupin.....	76	86,099
Brown.....	20	39,259	Madison.....	189	796,275
Bureau.....	48	122,670	Marion.....	76	221,410
Calhoun.....	1	1,874	Marshall.....	38	111,904
Carroll.....	28	30,480	Mason.....	46	74,775
Cass.....	29	8,405	Massac.....	18	11,618
Champaign.....	179	128,612	McDonough.....	33	41,101
Christian.....	50	24,457	McHenry.....	48	109,490
Clark.....	30	33,590	McLean.....	142	302,346
Clay.....	37	58,440	Menard.....	20	69,125
Clinton.....	31	24,338	Mercer.....	25	64,814
Coles.....	130	379,630	Monroe.....	4	43,800
Cook.....	6,571	6,994,833	Montgomery.....	60	61,008
Crawford.....	43	161,245	Morgan.....	46	81,396
Cumberland.....	17	29,565	Moultrie.....	17	38,305
DeKalb.....	108	185,471	Ogle.....	31	141,843
DeWitt.....	30	107,546	Peoria.....	91	697,321
Douglas.....	32	135,085	Perry.....	39	6,255
DuPage.....	52	215,974	Piatt.....	20	21,050
Edgar.....	51	43,334	Pike.....	24	180,219
Edwards.....	9	19,355	Pope.....	15	24,155
Effingham.....	21	67,381	Pulaski.....	3	1,900
Fayette.....	36	65,030	Putnam.....	18	19,605
Ford.....	16	22,648	Randolph.....	25	73,881
Franklin.....	49	72,738	Richland.....	26	54,755
Fulton.....	114	147,013	Rock Island.....	135	211,277
Gallatin.....	17	46,915	Saline.....	41	58,182
Greene.....	28	22,828	Sangamon.....	358	735,510
Grundy.....	26	116,950	Schuyler.....	9	29,853
Hamilton.....	23	21,191	Scott.....	7	6,240
Hancock.....	47	88,060	Shelby.....	39	58,193
Hardin.....	2	2,610	Stark.....	12	15,610
Henderson.....	18	32,151	St. Clair.....	336	718,341
Henry.....	103	120,354	Stephenson.....	59	86,631
Iroquois.....	59	144,119	Tazewell.....	32	67,113
Jackson.....	81	43,877	Union.....	22	37,408
Jasper.....	32	47,699	Vermilion.....	184	153,209
Jefferson.....	63	51,535	Wabash.....	30	47,855
Jersey.....	10	22,225	Warren.....	38	417,302
JoDavies.....	50	29,816	Washington.....	13	79,347
Johnson.....	9	58,935	Wayne.....	30	65,912
Kane.....	105	504,614	White.....	28	35,970
Kankakee.....	68	169,711	Whiteside.....	111	153,706
Kendall.....	15	30,665	Will.....	146	198,566
Knox.....	118	333,585	Williamson.....	90	82,845
Lake.....	93	358,829	Winnebago.....	115	262,724
LaSalle.....	147	353,536	Woodford.....	21	116,083
Lawrence.....	32	414,019			
Lee.....	26	51,525			
				12,327	\$20,007,135

DIVISIONS OF GRAIN INSPECTION AT CHICAGO AND EAST ST. LOUIS.

WALTER E. SCHMIDT, *Chief Grain Inspector*, Chicago.

JOHN D. EDMISTON, *Chief Grain Inspector*, East St. Louis.

Nothing of importance has occurred in the administration of the grain divisions during the year ending June 30, 1921. The work of these divisions has progressed along general lines of inspection of grain as it has been presented for the performance of their official duties.

In order that a detailed tabulated statement of the work done by the divisions may be recorded, the following tables have been prepared and are made a part of this report, to-wit:

CHICAGO DIVISION.

EXHIBIT NO. 1.—NUMBER OF CARS OF THE DIFFERENT KINDS OF GRAIN RECEIVED OR "IN" INSPECTION, VIA RAILROADS, JULY 1, 1920 TO JUNE 30, 1921.

Month.	C., B. & Q. R. R.							C., R. I. & P. R. R.								
	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscel- laneous.	Total.	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscel- laneous.	Total.
July, 1920	386	767	13	372	78	55	39	1,710	79	785	87	495	27	70	34	1,577
August, 1920	1,429	287	4	676	100	24	30	2,550	662	345	36	949	33	57	17	2,999
September, 1920	527	839	410	410	78	60	25	1,939	221	1,051	12	600	28	113	12	2,037
October, 1920	181	745	19	360	52	82	30	1,469	76	664	23	420	19	85	16	1,516
November, 1920	134	305	3	214	45	166	49	916	73	206	49	267	7	112	20	733
December, 1920	137	232	5	340	60	113	26	1,013	94	396	34	260	12	85	14	895
January, 1921	147	857	6	477	26	69	21	1,602	39	1,890	44	439	8	100	13	2,503
February, 1921	122	538	1	285	27	29	15	1,017	30	1,124	25	235	5	44	11	1,474
March, 1921	214	418	319	319	20	71	12	1,054	61	1,450	22	431	10	76	16	2,056
April, 1921	149	232	252	252	28	62	7	1,727	70	388	41	215	13	51	18	1,796
May, 1921	306	828	382	392	23	45	5	1,659	119	719	25	333	8	44	6	1,254
June, 1921	216	1,253	2	561	20	38	7	2,097	94	1,636	13	430	6	62	6	2,237
Total	3,998	7,401	54	4,658	559	814	269	17,753	1,618	10,633	411	5,064	189	899	183	18,977

EXHIBIT NO. 1—Continued.

Month.	Chicago & Alton R. R.							Illinois Central R. R.								
	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920	165	138	3	132	5	3	4	450	210	250		218	13	1	1	603
August, 1920	416	65	3	206	7	32	13	694	394	124		344	7	1	10	570
September, 1920	189	531		180	4	1	6	829	1,034	1,034		217	12		2	1,419
October, 1920	18	47	1	189	4	42	8	346	12	183	1	184	11			374
November, 1920	118	72		64				242	118	183		170	3	13		708
December, 1920	26	126	7	64		20	1	489	27	572		134	2		1	1,032
January, 1921	44	343	4	87				450	27	698	9	180	2	8	3	994
February, 1921	33	214	8	73	3	1	1	337	27	698		180	2		1	532
March, 1921	52	196	14	112	3	17	16	408	51	341		133	1	1	5	515
April, 1921	24	152	4	146				334	44	268	1	195	1			2,100
May, 1921	48	414	7	157		2	13	641	62	1,776		330				2,100
June, 1921	23	557	1	233	4	3	1	823	43	1,017	2	566	5	1	1	2,324
Total	1,052	3,245	53	1,597	40	141	71	6,199	1,061	8,448	17	2,799	63	32	27	12,447

EXHIBIT NO. 1-Continued.

Month.	Illinois Central (Freeport Division) R. R.						Chicago & Northwestern R. R.									
	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920.	8	299	---	184	1	20	12	524	97	1,258	3	590	27	102	71	2,148
August, 1920.	63	281	---	451	16	12	2	805	321	1,453	2	712	82	38	77	1,685
September, 1920.	29	467	---	175	8	6	6	683	217	1,494	8	743	123	139	80	2,764
October, 1920.	19	130	---	145	8	8	8	562	110	1,111	---	472	57	180	30	1,910
November, 1920.	13	235	---	178	1	1	1	428	295	236	---	253	73	163	53	1,401
December, 1920.	9	233	---	171	1	1	1	415	140	298	---	268	269	131	138	1,459
January, 1921.	9	1,085	---	143	8	18	5	1,244	184	3,438	---	248	75	175	59	4,517
February, 1921.	7	765	---	70	1	5	5	1,543	104	1,964	---	293	61	191	80	3,517
March, 1921.	6	954	---	120	2	3	1	1,094	444	2,262	---	346	18	59	54	3,244
April, 1921.	9	174	---	44	4	6	---	234	63	510	1	251	35	66	53	937
May, 1921.	46	305	---	112	1	8	---	472	274	1,176	1	335	39	84	68	1,977
June, 1921.	23	664	---	169	5	12	1	874	145	2,230	---	477	16	62	61	2,991
Total.	225	5,900	---	1,811	44	108	42	8,030	2,193	16,767	17	5,148	768	1,170	773	26,816

EXHIBIT NO. 1—Continued.

Month.	Wabash R. R.						Chicago & Eastern Illinois R. R.									
	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920	149	135	17	112	5	2	5	425	50	90	3	105	4	1	1	254
August, 1920	389	75	3	130	9	5	1	612	171	492	1	233	15	1	9	473
September, 1920	166	390	4	77	14	1	1	642	73	402	1	175	19	3	1	672
October, 1920	56	326	1	132	8	3	1	527	16	248	4	172	6	1	2	449
November, 1920	7	115	1	72	3	20	1	218	10	203	1	81	6	1	2	304
December, 1920	26	195	5	76	4	1	1	318	5	360	1	51	4	1	2	424
January, 1921	41	270	1	70	5	1	1	318	8	362	1	61	3	1	2	437
February, 1921	26	169	7	71	4	5	2	385	8	390	1	98	1	3	2	488
March, 1921	49	118	19	106	8	8	3	275	8	224	1	128	1	3	3	354
April, 1921	52	134	32	120	5	8	1	310	13	178	2	131	2	10	2	327
May, 1921	53	483	3	149	3	1	1	692	63	574	2	166	1	1	3	818
June, 1921	46	549	4	180	1	1	1	782	16	768	1	314	3	6	1	1,109
Total	1,060	2,939	97	1,295	69	65	16	5,541	431	3,843	13	1,715	64	28	26	6,120

EXHIBIT NO. 1—Continued.

Month.	Chicago, Milwaukee & St. Paul R. R.						Soo Line.									
	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920	131	814	5	356	49	85	42	1,522	2	15				5	27	12
August, 1920	290	290	4	506	49	24	46	1,300	4	7		1		4	4	10
September, 1920	185	964	4	502	164	121	46	1,996	10	9		6	12	43	10	68
October, 1920	84	569	2	331	24	119	50	1,198	5	5		1	3	15	5	34
November, 1920	115	207	245	245	11	131	40	1,749	43	5		3	2	24	21	261
December, 1920	146	374	104	194	30	133	45	981	181	19		4		3	32	251
January, 1921	53	1,897	3	281	32	72	57	2,375	5	18			8	10	3	47
February, 1921	89	1,191	5	191	25	49	44	1,594	6	11				3	20	85
March, 1921	117	1,529	2	354	9	62	37	2,110	42	16		2		6	19	28
April, 1921	93	405	2	142	8	97	28	2,773	14	2				11	1	3
May, 1921	125	587	2	215	22	99	29	1,079	34	2		1		3	8	40
June, 1921	83	1,107	8	297	6	55	23	1,584	33	10		2		3	2	49
Total	1,520	9,934	37	3,694	438	1,067	501	17,191	331	113			34	185	90	832

EXHIBIT NO. 1—Continued.

Month.	'Chicago Great Western R. R.							A., T. & S. F. R. R.								
	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920.....	17	155	4	94	8	26	25	329	57	145	72	62	8	17	15	376
August, 1920.....	97	78	3	333	16	16	6	549	196	32	25	98	16	9	11	387
September, 1920.....	43	263	1	242	21	25	11	605	109	229	26	98	14	4	2	481
October, 1920.....	15	147	1	110	6	17	9	305	26	174	16	60	5	4	2	284
November, 1920.....	31	71	1	86	4	43	16	271	52	95	9	68	14	42	6	285
December, 1920.....	86	106	1	101	7	44	14	358	10	182	41	68	44	22	2	287
January, 1921.....	20	537	1	116	3	41	8	725	23	185	53	90	5	4	2	362
February, 1921.....	19	288	8	85	1	21	7	429	10	131	24	68	4	16	3	256
March, 1921.....	52	236	3	102	2	30	6	429	21	66	43	68	2	3	1	224
April, 1921.....	54	65	3	40	2	13	3	180	71	128	11	147	5	7	2	368
May, 1921.....	85	172	3	97	6	18	5	385	85	394	19	140	11	7	1	637
June, 1921.....	41	409	2	188	3	48	7	698	60	205	27	199	4	2	1	497
Total.....	580	2,527	27	1,594	77	342	120	5,267	720	1,865	366	1,204	132	131	46	4,464

EXHIBIT NO. 1—Continued.

Month.	E., J. & E. R. R.							N. Y. C. R. R.								
	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920.....	41	26	1	5	2	3	3	33	1	19	1	18	4	1	1	43
August, 1920.....	35	35	1	26	2	6	6	110	68	23	1	149	13	1	1	253
September, 1920.....	11	45	1	10	3	4	4	73	37	362	1	130	32	1	1	562
October, 1920.....	11	81	1	25	1	8	8	121	16	134	1	72	5	1	7	234
November, 1920.....	6	20	1	12	2	9	9	48	5	66	1	26	3	3	4	105
December, 1920.....	4	4	1	25	1	12	12	45	5	95	1	15	5	5	2	127
January, 1921.....	4	63	4	23	1	11	1	108	5	116	1	36	2	1	2	161
February, 1921.....	1	32	1	19	1	3	3	55	6	117	1	33	1	1	10	168
March, 1921.....	5	27	1	24	1	7	7	64	8	78	2	39	1	1	5	131
April, 1921.....	7	16	1	27	2	3	3	55	6	103	1	62	4	2	1	179
May, 1921.....	8	48	1	37	1	2	2	96	19	280	1	85	4	1	1	389
June, 1921.....	10	117	1	62	1	4	4	183	13	319	1	134	3	1	1	470
Total.....	110	513	1	295	13	66	1	998	193	1,712	2	802	76	3	34	2,822

EXHIBIT NO. 1—Continued.

Month.	C. I. & L. R. R.							Grand Trunk R. R.							
	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Miscellaneous.	Total.	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920	1		1	1	5		8	2					1		3
August, 1920	19			21	8		48	12				7	3		22
September, 1920	9		9	92	14		124	11			7		5		23
October, 1920	3			15	8	5	31	3	2				2		6
November, 1920		1			1	1	3	1	1		1				4
December, 1920	1			1			2	1							2
January, 1921							11	1					1		2
February, 1921		11					11	3	3						6
March, 1921		27					29	3	2						5
April, 1921	1	10		3	1	2	16	3	7		1				11
May, 1921	5	10		4	2		21	3					2		5
June, 1921	9	19		2	4	1	35	16	1			2		1	20
July, 1921	12	40		24	2		78	3	4		1	2			10
Total	60	130	10	180	45	9	434	60	19		17	18		1	115

EXHIBIT NO. 1—Continued.

Month.	P., C., C. & St. L. R. R.						C., T. H. & S. E. R. R.									
	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.	Wheat.	Corn.	Kafir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920.		1					1	2	4	2			4			10
August, 1920.	31	13		37	7			89	3	3			6			12
September, 1920.	13	20		60	16		2	111		12		10				22
October, 1920.	5	10		30	1		1	47	1	20		16			1	38
November, 1920.	3	3		7	1			14	1	14		10				25
December, 1920.	1				1			2		1		2				3
January, 1921.	1			6	1			13		31		3				33
February, 1921.		18		2	1			21		16		6				22
March, 1921.	1	13		9				23	1	26		17				44
April, 1921.	3				1	1		4		8		8				16
May, 1921.	2	1		1				5	3	40		16				56
June, 1921.	4	25		10	3	1	1	44	1	113		53	1	1		169
Total.....	64	109		163	32	2	6	376	14	295		152	1	1	1	415

DIVISION OF GRAIN INSPECTION.

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EXHIBIT NO. 1—Concluded.

Months.	Specials.							Total.
	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	
July, 1920.....	8	8	-----	9	4	-----	-----	29
August, 1920.....	64	5	-----	48	25	-----	6	148
September, 1920.....	66	11	-----	63	34	-----	2	176
October, 1920.....	9	3	-----	14	8	-----	2	36
November, 1920.....	6	1	-----	9	5	-----	9	30
December, 1920.....	8	5	-----	11	3	-----	6	33
January, 1921.....	8	17	-----	14	3	-----	8	50
February, 1921.....	9	11	-----	4	-----	-----	2	26
March, 1921.....	5	14	-----	6	-----	-----	3	28
April, 1921.....	9	2	-----	11	1	-----	3	26
May, 1921.....	225	36	-----	25	-----	-----	1	290
June, 1921.....	21	66	-----	28	2	-----	3	120
Total.....	441	179	-----	242	85	-----	45	992

EXHIBIT NO. 2—NUMBER OF CARS OF THE DIFFERENT KINDS OF GRAIN RECEIVED OR "IN" INSPECTION—BY MONTHS—JULY 1, 1920 TO JUNE 30, 1921.

Months.	Wheat.	Corn.	Kaffir Corn.	Oats.	Rye.	Barley.	Miscellaneous.	Total.
July, 1920.....	1,367	4,906	208	2,797	244	413	262	10,197
August, 1920.....	4,659	2,141	83	4,993	414	216	229	12,736
September, 1920.....	2,047	8,109	54	3,797	604	552	213	15,376
October, 1920.....	687	5,876	68	2,718	213	466	186	10,212
November, 1920.....	643	1,914	66	1,645	186	778	229	5,461
December, 1920.....	921	3,586	93	1,742	395	625	241	7,603
January, 1921.....	596	11,949	112	2,365	164	450	158	15,794
February, 1921.....	507	7,676	87	1,680	124	256	189	10,519
March, 1921.....	1,139	8,005	107	2,399	75	347	174	12,246
April, 1921.....	694	2,775	93	1,796	81	329	129	6,896
May, 1921.....	1,636	7,855	64	2,593	131	323	139	12,741
June, 1921.....	886	11,679	60	3,928	86	299	120	17,058
Total.....	15,782	76,471	1,095	32,450	2,717	5,054	2,269	135,838

EXHIBIT NO. 3—TOTAL "IN" INSPECTIONS BY RAILROADS, BY MONTHS, JULY 1, 1920—JUNE 30, 1921—NUMBER OF CARS.

Months.	C. & B. & Q.	C. & R. I. & P.	C. & A.	I. C. Main Line.	I. C. Free-port Div.	C. & N. W.	Wa-bash.	C. & E. I.	C. & M. & St. P.	Soo Line.
July, 1920.....	1,710	1,577	450	693	524	2,148	425	254	1,522	61
August, 1920.....	2,550	2,099	694	879	805	1,685	612	474	1,300	28
September, 1920.....	1,939	2,037	929	1,419	693	2,794	642	672	1,986	88
October, 1920.....	1,469	1,316	649	974	592	1,910	527	449	1,188	34
November, 1920.....	916	733	202	289	248	901	218	304	749	101
December, 1920.....	1,013	895	244	786	378	1,480	318	424	931	251
January, 1921.....	1,602	2,503	489	1,022	1,254	4,212	388	437	2,375	47
February, 1921.....	1,017	1,474	337	924	862	2,517	275	488	1,594	20
March, 1921.....	1,054	2,056	408	552	1,094	3,244	310	364	2,110	85
April, 1921.....	727	796	334	515	234	957	352	327	773	28
May, 1921.....	1,659	1,254	641	2,169	472	1,977	692	818	1,079	40
June, 1921.....	2,097	2,237	822	2,234	874	2,091	782	1,109	1,584	49
Total for 1920-1921.....	17,753	18,977	6,199	12,447	8,030	26,816	5,541	6,120	17,191	832
Total for 1919-1920.....	21,408	17,104	9,309	10,336	6,134	20,660	6,645	6,104	15,567	269
Total for 1918-1919.....	25,585	18,169	10,499	23,715	5,573	29,976	13,598	10,935	18,273	521
Total for 1917-1918.....	17,856	15,917	7,701	14,644	5,757	19,722	8,906	7,208	13,275	1,142
Total for 1916-1917.....	24,822	20,959	8,032	16,431	7,771	34,655	7,016	7,351	21,627	3,351
Total for 1915-1916.....	28,130	18,301	10,987	27,981	4,826	37,182	11,955	12,835	21,960	3,774
Total for 1914-1915.....	41,038	32,921	9,255	13,659	10,611	47,780	10,316	7,402	28,812	1,331
Total for 1913-1914.....	29,476	22,355	6,347	11,262	6,392	30,890	6,914	6,048	20,744	1,762
Total for 1912-1913.....	34,614	28,233	8,415	15,995	9,869	36,939	7,612	9,908	32,523	2,559

EXHIBIT NO. 3—Concluded.

Months.	C. G. W.	A., T. & S. F.	E. J. & E.	N. Y. C.	C. I. & L.	Grand Trunk.	P. C. & St. L.	C., T. H. & S. E.	Specials.	Total.
July, 1920.....	329	376	33	43	8	3	2	10	29	10,197
August, 1920.....	549	387	110	253	48	22	89	12	148	12,735
September, 1920.....	605	481	73	562	124	23	111	22	176	15,376
October, 1920.....	305	284	121	234	33	6	47	38	36	10,212
November, 1920.....	271	285	48	105	18	4	14	25	30	5,461
December, 1920.....	358	287	45	127	14	2	3	14	33	7,603
January, 1921.....	725	362	105	161	11	5	13	33	50	15,794
February, 1921.....	429	256	55	168	29	5	21	22	26	10,519
March, 1921.....	429	224	64	131	15	11	23	44	28	12,246
April, 1921.....	180	368	55	179	21	4	4	16	26	5,896
May, 1921.....	389	657	96	389	35	20	5	59	290	12,741
June, 1921.....	698	497	193	470	78	10	44	169	120	17,058
Total for 1920-1921.....	5,267	4,464	998	2,822	434	115	376	464	992	135,838
Total for 1919-1920.....	5,988	4,736	875	2,268	449	189	431	311	1,604	130,387
Total for 1918-1919.....	6,427	6,668	1,505	3,666	989	307	1,408	737	3,784	182,335
Total for 1917-1918.....	5,447	3,741	1,076	2,931	358	75	594	399	1,584	128,333
Total for 1916-1917.....	8,046	5,184	1,421	3,447	381	184	551	-----	1,824	173,083
Total for 1915-1916.....	7,757	7,408	1,430	3,700	1,348	213	1,355	-----	4,290	205,342
Total for 1914-1915.....	12,197	11,152	1,580	2,291	354	133	-----	-----	3,119	234,262
Total for 1913-1914.....	7,931	3,899	1,571	2,583	265	71	-----	-----	2,581	163,035
Total for 1912-1913.....	10,895	7,220	1,655	3,350	384	23	-----	-----	3,693	215,951

EXHIBIT NO. 4—AVERAGE BUSHEL CONTENTS PER CAR OF GRAIN ON ALL RAILROADS FROM 1891 TO 1921 INCLUSIVE—ON ARRIVAL.

	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Wheat.....	614	619	650	660	758	772	779	812	887	945	954	1,004	1,063	1,070	1,169
Corn.....	628	669	700	740	687	700	747	783	867	925	985	1,062	1,120	1,146	1,114
Rye.....	601	612	650	650	641	652	721	735	802	910	989	970	1,042	1,043	1,051
Oats.....	1,048	1,096	1,100	1,150	1,192	1,218	1,150	1,155	1,277	1,036	1,447	1,432	1,392	1,454	1,721
Barley.....	729	785	800	815	803	807	767	801	852	915	983	1,046	1,094	1,140	1,019

EXHIBIT NO. 4—Concluded.

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Wheat.....	1,150	1,232	1,293	1,262	1,220	1,220	1,253	1,361	1,250	1,250	1,250	1,251	1,307	1,400	1,360
Corn.....	1,181	1,225	1,297	1,274	1,317	1,317	1,292	1,313	1,500	1,400	1,400	1,375	1,301	1,600	1,430
Rye.....	1,105	1,180	1,286	1,221	1,237	1,237	1,193	1,224	1,100	1,100	1,100	1,100	1,200	1,200	1,200
Oats.....	1,761	1,764	1,580	1,757	1,864	1,234	1,784	2,004	1,900	1,850	1,850	2,000	2,070	2,200	2,200
Barley.....	1,019	1,214	1,400	1,334	1,012	1,012	1,502	1,690	1,550	1,400	1,400	1,400	1,800	1,800	1,580

EXHIBIT NO. 5—"IN" INSPECTION VIA LAKE STEAMERS JULY 1, 1920—JUNE 30, 1921.

Month.	Spring Wheat.	Oats.	Total.
July, 1920.....	-----	-----	-----
August, 1920.....	49,954	-----	49,954
September, 1920.....	-----	-----	-----
October, 1920.....	309,788	-----	309,788
November, 1920.....	354,896	-----	354,896
December, 1920.....	618,564	-----	618,564
January, 1921.....	68,713	-----	68,713
February, 1921.....	-----	-----	-----
March, 1921.....	198,769	-----	198,769
April, 1921.....	-----	119,796	119,796
May, 1921.....	-----	212,466	212,466
June, 1921.....	-----	167,698	167,698
Total.....	1,600,684	499,960	2,100,644

EXHIBIT NO. 6—BUSHEL INSPECTED INTO LAKE VESSELS FOR SHIPMENT OR "OUT" INSPECTION OF DIFFERENT KINDS OF GRAIN FROM PUBLIC ELEVATORS—JULY 1, 1920—JUNE 30, 1921.

Months.	Wheat.	Corn.	Oats.	Rye.	Barley.	Total.
July, 1920.....	29,104	130,953	-----	-----	93,000	253,057
August, 1920.....	-----	128,998	-----	85,715	109,966	324,679
September, 1920.....	-----	190,666	-----	-----	-----	190,666
October, 1920.....	-----	732,328	-----	81,085	-----	813,413
November, 1920.....	-----	679,870	-----	-----	-----	679,870
December, 1920.....	-----	-----	-----	-----	-----	-----
January, 1921.....	-----	-----	-----	-----	-----	-----
February, 1921.....	-----	-----	-----	-----	-----	-----
March, 1921.....	-----	-----	-----	-----	-----	-----
April, 1921.....	218,126	2,567,897	230,000	-----	-----	3,016,023
May, 1921.....	201	2,767,814	1,017,568	45,023	-----	3,890,606
June, 1921.....	1,005,737	1,499,197	1,170,994	67,108	-----	3,743,036
Total.....	1,253,168	8,697,723	2,418,562	278,931	202,966	12,851,360

EXHIBIT NO. 7—BUSHEL INSPECTED INTO LAKE VESSELS FOR SHIPMENT OR "OUT" INSPECTION OF DIFFERENT KINDS OF GRAIN FROM PRIVATE ELEVATORS, JULY 1, 1920—JUNE 30, 1921.

Months.	Wheat.	Corn.	Oats.	Rye.	Barley.	Total.
July, 1920.....	586,664	128,000	-----	-----	-----	714,664
August, 1920.....	4,006,351	34,000	136,371	253,844	-----	4,430,566
September, 1920.....	1,254,214	856,000	118,000	187,724	-----	2,415,938
October, 1920.....	207,700	3,374,025	216,535	594,490	-----	4,392,750
November, 1920.....	100,000	1,920,319	175,700	-----	-----	2,196,019
December, 1920.....	487,167	-----	-----	-----	-----	487,167
January, 1921.....	-----	-----	-----	-----	-----	-----
February, 1921.....	-----	-----	-----	-----	-----	-----
March, 1921.....	-----	-----	-----	-----	-----	-----
April, 1921.....	492,556	2,681,909	297,299	35,943	-----	3,507,707
May, 1921.....	883,585	4,706,896	1,204,676	35,030	51,994	6,882,181
June, 1921.....	411,102	9,561,690	2,933,907	15,379	-----	12,912,078
Total.....	8,429,339	23,252,839	5,082,488	1,122,410	51,994	37,939,070

EXHIBIT NO. 8—NUMBER OF CARS AND BUSHEL OF DIFFERENT KINDS OF GRAIN "IN" BY EACH PUBLIC ELEVATOR—JULY 1, 1920—JUNE 30, 1921.

CARS AND BUSHEL "IN"

Elevators.	Wheat.		Corn.		Oats.		Rye.		Barley.	
	Number cars.	Number bushels.	Number cars.	Number bushels.	Number cars.	Number bushels.	Number cars.	Number bushels.	Number cars.	Number bushels.
Armour "A" & "B"	390	511,720	969	1,457,075	750	1,643,228	60	83,603	6	9,004
Armour "C"	189	254,709	846	1,264,956	334	725,748	141	204,480	52	94,039
J. Rosenbaum "A"	-----	-----	-----	-----	1	2,387	-----	-----	-----	-----
J. Rosenbaum "B"	308	435,120	1,623	2,874,692	59	133,180	5	6,443	-----	-----
Rock Island "A"	-----	270	2,017	3,038,188	261	564,041	4	5,081	-----	-----
Chicago & St. Louis.	1	1,417	17	25,455	2,040	4,542,292	-----	-----	-----	-----
National	60	73,318	138	206,869	518	1,158,970	1	505	-----	-----
Calumet "B"	309	471,212	1,225	1,856,134	-----	-----	-----	-----	-----	-----
South Chicago "C"	39	51,269	4,393	6,661,003	876	1,916,939	113	161,254	-----	-----
Calumet "C"	153	215,785	1,634	2,638,538	574	1,280,460	208	301,279	-----	-----
Total.....	1,449	2,014,820	13,162	20,022,910	5,413	11,967,252	532	762,645	58	103,043

RECAPITULATION—CARS AND BUSHEL "IN"

Total number of cars	1,449	cars and bushels of wheat.....	2,014,820
Total number of cars	13,162	and bushels of corn.....	20,022,910
Total number of cars	5,413	and bushels of oats.....	11,967,252
Total number of cars	532	and bushels of rye.....	762,645
Total number of cars	58	and bushels of barley.....	103,043
Total.....	20,614		34,870,670

EXHIBIT NO. 9.—NUMBER OF CARS AND BUSHELS OF DIFFERENT KINDS OF GRAIN
"OUT" BY EACH PUBLIC ELEVATOR, JULY 1, 1920—JUNE 30, 1921.

CARS AND BUSHELS "OUT"

Elevators.	Wheat.		Corn.		Oats.		Rye.		Barley.	
	Number cars.	Number bushels.	Number cars.	Number bushels.	Number cars.	Number bushels.	Number cars.	Number bushels.	Number cars.	Number bushels.
Armour "A" & "B"	291	411,468	381	567,447	191	444,610	72	105,019	31	50,337
Armour "C"	429	576,697	130	201,714	168	368,443	270	395,957	228	396,211
J. Rosenbaum "A"	92	92	—	—	24	49,943	—	126	—	—
J. Rosenbaum "B"	457	679,768	346	549,430	13	27,446	—	—	—	—
Rock Island "A"	2	6,253	232	351,046	247	542,025	—	—	—	—
Chicago & St. Louis	22	81,124	12	22,078	669	1,461,857	2	2,150	—	—
National	—	—	42	67,677	12	20,530	1	506	—	—
Calumet "B"	135	181,121	241	479,948	—	—	—	—	—	—
South Chicago "C"	146	224,720	866	1,315,812	469	971,906	50	71,838	—	—
Calumet "C"	211	296,633	452	804,906	177	387,972	108	164,025	—	—
Total	1,693	2,407,870	2,802	4,360,047	1,970	4,273,331	503	739,630	259	446,548

RECAPITULATION—CARS AND BUSHELS "OUT"

Total number of cars	1,693 and bushels of wheat	2,407,870
Total number of cars	2,802 and bushels of corn	4,360,047
Total number of cars	1,970 and bushels of oats	4,273,331
Total number of cars	503 and bushels of rye	739,630
Total number of cars	259 and bushels of barley	446,548
Total	7,227	12,227,416

EXHIBIT NO. 10.—NUMBER OF BOATS AND BUSHELS OF DIFFERENT KINDS OF GRAIN
"IN" BY EACH PUBLIC ELEVATOR, JULY 1, 1920—JUNE 30, 1921.

NUMBER OF BOATS AND BUSHELS "IN"

Elevators.	Wheat.		Corn.		Oats.		Rye.		Barley.	
	Number boats.	Number bushels.	Number boats.	Number bushels.	Number boats.	Number bushels.	Number boats.	Number bushels.	Number boats.	Number bushels.
Armour "A" & "B"	8	267,707	1	11,004	42	585,710	2	21,416	1	12,496
Armour "C"	21	397,943	28	304,158	28	390,466	26	337,914	21	252,292
J. Rosenbaum "B"	13	619,711	8	259,287	—	—	—	—	—	—
South Chicago "C"	2	150,045	—	—	—	—	—	—	—	—
Calumet "C"	1	149,979	—	—	—	—	—	—	—	—
Total	45	1,585,385	37	574,449	70	976,176	28	359,330	22	264,788

RECAPITULATION—BOATS AND BUSHELS "IN"

Total number of boats	45 and bushels of wheat	1,585,385
Total number of boats	37 and bushels of corn	574,449
Total number of boats	70 and bushels of oats	976,176
Total number of boats	28 and bushels of rye	359,330
Total number of boats	22 and bushels of barley	264,788
Total	202	3,760,128

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EXHIBIT NO. 11—NUMBER OF BOATS AND BUSHELS OF DIFFERENT KINDS OF GRAIN "OUT" BY EACH PUBLIC ELEVATOR, JULY 1, 1920—JUNE 30, 1921.

NUMBER OF BOATS AND BUSHELS "OUT"

Elevators.	Wheat.		Corn.		Oats.		Rye.		Barley.	
	Number boats.	Number bushels.	Number boats.	Number bushels.	Number boats.	Number bushels.	Number boats.	Number bushels.	Number boats.	Number bushels.
Armour "A" & "B"	2	306,251	20	523,949	30	896,626	1	4,405	2	43,721
Armour "C"	5	74,418	29	788,362	17	353,306	5	171,274	5	169,246
J. Rosenbaum "B"	4	420,398	23	1,622,258	1	19,116	1	6,443		
Rock Island "A"			18	1,664,238	7	592,372	1	5,081		
Chicago & St. Louis.			10	565,022						
Calumet "B"	3	275,573	2	67,074	6	492,779				
National.	1	72,743	30	3,346,647	3	190,830	3	132,549		
South Chicago "C"	3	69,325	21	1,064,327	4	553,100	6	137,247		
Calumet "C"	1	56,135								
Total.....	19	1,273,843	153	9,641,877	68	3,098,129	17	456,999	7	212,967

RECAPITULATION—NUMBER OF BOATS AND BUSHELS "OUT"

Total number of boats	19	and bushels of wheat.....	1,273,843
Total number of boats	153	and bushels of corn.....	9,641,877
Total number of boats	68	and bushels of oats.....	3,098,129
Total number of boats	17	and bushels of rye.....	456,999
Total number of boats	7	and bushels of barley.....	212,967
Total.....	264		14,683,815

EXHIBIT NO. 12—BUSHELS BY GRADES AND TOTAL OF ALL KINDS OF GRAIN ON HAND IN ALL PUBLIC ELEVATORS JULY 1, 1920.

Elevators.	Two Red Winter Wheat.	One Hard Winter Wheat.	One Northern Spring Wheat.	Two Northern Spring Wheat.	Three Northern Spring Wheat.	One Dark Northern Spring Wheat.	Two Dark Northern Spring Wheat.	Three Dark Northern Spring Wheat.	Total Wheat.
Armour "A" & "B"			12,158	3,576	4,233		9,230	44,667	73,864
Armour "C"				1,607					1,607
J. Rosenbaum "B"									
Rock Island "A"									
Chicago and St. Louis.									
Calumet "B"				1,388			8,709	4,423	14,517
National.	575								575
South Chicago "C"		352	2,487					3,211	6,050
Calumet "C"					927	1,189	11,349	1,423	14,888
Total.....	575	352	14,645	6,568	5,160	1,189	29,288	53,724	111,501

EXHIBIT NO. 12—Continued.

Elevators.	One White Corn.	Two White Corn.	Three White Corn.	Four White Corn.	Five White Corn.	One Yellow Corn.	Two Yellow Corn.	Three Yellow Corn.	Four Yellow Corn.
Armour "A" & "B"	26,618	17,873	1,789			38,288	213,200	1,414	
Armour "C"	34,377	122,006	5,489	1,219	1,172	95,434	235,172	11,806	2,039
J. Rosenbaum "B"	87,611	145,688	1,147			341,730	258,095		
Rock Island "A"	147,887	129,621				346,620	299,648		
Chicago & St. Louis.						1,374	2,003		
Calumet "B"	84,013	163,667				247,234	251,795	6,560	
National.						37,828	34,291		
South Chicago "C"	318,608	205,804				585,131	463,669	16,280	
Calumet "C"	115,293	84,435				294,146	275,417		
Total.....	814,407	869,093	8,425	1,219	1,172	1,987,785	2,033,290	36,040	2,039

EXHIBIT NO. 12—Continued.

Elevators.	Six Yellow Corn.	S. G. Yellow Corn.	One Mixed Corn.	Two Mixed Corn.	Three Mixed Corn.	Four Mixed Corn.	Five Mixed Corn.	Total Corn.
Armour "A" & "B".....			19,814	55,706	2,801		1,498	379,001
Armour "C".....	4,021	2,511	33,443	53,978	9,641	1,348		613,655
J. Rosenbaum "B".....			58,757	69,278				962,306
Rock Island "A".....			38,481	60,648				1,022,905
Chicago & St. Louis.....								3,377
Calumet "B".....				57,901				811,170
National.....								72,119
South Chicago "C".....			114,223	304,107				2,007,802
Calumet "C".....								769,291
Total.....	4,021	2,511	264,718	601,618	12,442	1,348	1,498	6,641,626

EXHIBIT NO. 12—Continued.

Elevators.	One White Oats.	Two White Oats.	Three White Oats.	Four White Oats.	Two Mixed Oats.	Total Oats.
Armour "A" & "B".....	47,376	455,603	412,948		2,184	918,411
Armour "C".....	52,804	293,410	61,850	2,201		410,265
J. Rosenbaum "B".....	17,026		88,709			105,735
Rock Island "A".....			2,898			2,898
Chicago & St. Louis.....	398,303	1,727,509	488,610			2,614,422
Calumet "B".....						
National.....		379,938	265,729			645,667
South Chicago "C".....	244,758	349,356	159,692		397	754,203
Calumet "C".....	224,155	4,713	110,810			339,378
Total.....	984,422	3,210,529	1,590,946	2,201	2,881	5,790,979

EXHIBIT NO. 12—Continued.

Elevators.	Two Rye.	Total Rye.	Three Barley	Total Barley.
Armour "A" & "B".....				
Armour "C".....			3,500	3,500
J. Rosenbaum "B".....				
Rock Island "A".....				
Chicago & St. Louis.....				
Calumet "B".....				
National.....				
South Chicago "C".....	1,029	1,029		
Calumet "C".....				
Total.....	1,029	1,029	3,500	3,500

EXHIBIT NO. 12—Concluded.

RECAPITULATION.

Elevators.	Total Wheat.	Total Corn.	Total Oats.	Total Rye.	Total Barley.	Grand total.
Armour "A" & "B".....	73,864	379,001	918,411			1,371,276
Armour "C".....	1,607	613,655	410,265		3,500	1,029,027
J. Rosenbaum "B".....		962,306	105,735			1,068,041
Rock Island "A".....		1,022,905	2,898			1,025,803
Chicago & St. Louis.....		3,377	2,614,422			2,617,799
Calumet "B".....	14,817	811,170				825,987
National.....	875	72,119	645,667			718,361
South Chicago "C".....	6,060	2,007,802	754,203	1,029		2,769,094
Calumet "C".....	14,888	769,291	339,378			1,123,557
Total.....	115,501	6,641,626	5,790,979	1,029	3,500	12,548,635

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EXHIBIT NO. 13—NUMBER OF BUSHELS OF EACH KIND OF GRAIN IN STORE (PUBLIC ELEVATORS) AT THE CLOSE OF BUSINESS EACH WEEK FROM JULY 1, 1920 TO JUNE 30, 1921.

	Wheat— Bushels.	Corn— Bushels.	Oats— Bushels.	Rye— Bushels.	Barley— Bushels.	Total
July 3, 1920.....	101,025	191,476	197,014	86,459	285,211	861,185
July 10, 1920.....	96,170	350,164	147,480	94,456	270,290	958,560
July 17, 1920.....	75,361	607,653	68,631	100,091	162,115	1,013,851
July 24, 1920.....	30,169	572,090	50,108	128,062	152,615	933,044
July 31, 1920.....	24,568	560,519	294,627	154,337	150,915	1,184,966
August 7, 1920.....	23,419	464,019	394,345	145,634	138,469	1,165,886
August 14, 1920.....	8,142	159,900	383,483	7,458	20,896	579,879
August 21, 1920.....	8,142	114,656	323,527	25	16,035	462,385
August 28, 1920.....	4,779	76,581	251,691	236	14,660	347,947
September 4, 1920.....	4,779	60,888	214,848	236	5,879	286,630
September 11, 1920.....	3,449	73,349	285,488	236	5,000	367,522
September 18, 1920.....	3,449	136,016	573,764	2,198	5,000	720,427
September 25, 1920.....	3,449	433,239	877,537	69,526	5,000	1,388,751
October 2, 1920.....	40,341	1,362,727	1,088,967	81,330	19,996	2,593,361
October 9, 1920.....	53,848	1,395,503	1,240,544	19,501	19,996	2,729,392
October 16, 1920.....	2,652	1,423,321	1,580,253	236	19,996	3,026,458
October 23, 1920.....	107,492	1,243,426	2,025,927	236	.....	3,376,981
October 30, 1920.....	106,980	1,206,424	2,447,337	236	.....	3,760,977
November 6, 1920.....	270,883	1,082,830	2,598,048	1,845	.....	3,953,606
November 13, 1920.....	99,885	679,014	2,643,508	22,869	.....	3,445,276
November 20, 1920.....	49,915	512,399	2,587,371	44,038	.....	3,193,717
November 27, 1920.....	251,843	388,413	2,541,371	79,894	19,996	3,281,416
December 4, 1920.....	225,819	205,723	2,458,871	193,713	98,528	3,182,654
December 11, 1920.....	506,635	185,734	2,165,748	140,551	117,544	3,116,212
December 18, 1920.....	478,449	179,638	2,034,447	290,992	210,518	3,194,044
December 25, 1920.....	695,674	320,976	5,027,351	240,808	229,343	3,514,102
December 31, 1920.....	821,392	960,001	2,081,290	400,744	225,711	4,489,138
January 8, 1921.....	777,928	780,381	1,835,664	262,045	197,886	3,853,904
January 15, 1921.....	595,890	647,809	1,778,338	7,174	173,636	3,202,847
January 22, 1921.....	468,966	655,858	1,865,385	267	158,251	3,178,727
January 29, 1921.....	430,317	1,616,029	1,997,308	244	155,336	4,199,234
February 5, 1921.....	366,114	2,373,670	2,095,700	.....	104,500	4,939,984
February 12, 1921.....	324,226	2,912,593	2,212,346	.....	103,000	5,552,765
February 19, 1921.....	298,441	3,259,397	2,871,095	.....	82,000	6,511,933
February 26, 1921.....	259,903	3,550,755	2,884,468	.....	64,000	6,759,126
March 5, 1921.....	256,534	3,976,322	3,095,535	.....	44,800	7,373,191
March 12, 1921.....	166,711	4,406,637	3,667,140	.....	16,025	8,256,513
March 19, 1921.....	231,009	5,092,897	4,283,633	.....	13,000	9,620,539
March 26, 1921.....	282,146	5,332,923	4,565,289	.....	13,000	10,173,358
April 2, 1921.....	370,197	5,698,306	4,445,424	.....	13,000	10,436,927
April 9, 1921.....	282,063	5,649,008	4,553,482	.....	3,000	10,488,143
April 16, 1921.....	43,065	5,554,919	4,557,375	.....	3,000	10,158,359
April 23, 1921.....	24,361	4,853,310	4,488,410	.....	3,000	9,369,081
April 30, 1921.....	24,361	3,164,561	4,511,068	.....	3,000	7,703,200
May 7, 1921.....	11,628	1,280,345	3,989,366	.....	3,000	5,284,339
May 14, 1921.....	11,628	1,056,833	3,737,147	17,431	3,000	4,826,039
May 21, 1921.....	4,126	1,153,880	3,644,664	39,903	3,000	4,845,073
May 28, 1921.....	151,551	1,260,237	3,774,875	89,110	21,501	5,297,274
June 4, 1921.....	956,886	1,470,777	3,937,232	36,884	21,501	6,422,760
June 11, 1921.....	499,728	2,246,143	4,752,723	1,029	3,500	8,603,123
June 18, 1921.....	134,096	4,711,337	5,319,908	1,029	3,500	10,169,870
June 25, 1921.....	161,499	5,880,761	5,673,527	1,446	3,500	11,720,733
July 2, 1921.....	111,507	6,641,630	5,790,982	1,029	3,500	12,548,648

EXHIBIT 14—BUSHELS INSPECTED "OUT" OF ALL PUBLIC ELEVATORS OF DIFFERENT KINDS OF GRAIN FOR THE YEAR 1920—1921.

Month.	Winter Wheat— Bushels.	Spring Wheat— Bushels.	Corn— Bushels.	Kaffir Corn and Milo Maize— Bushels.	Oats— Bushels.	Rye— Bushels.	Barley— Bushels.	Total— Bushels.
July, 1920.....	165,900	399	241,636	-----	211,803	44,941	134,295	798,974
August, 1920.....	53,768	-----	497,009	-----	291,856	226,285	149,218	1,218,136
September, 1920.....	19,396	383	205,085	-----	53,503	-----	5,697	284,074
October, 1920.....	6,496	153,526	974,165	-----	327,683	81,085	21,188	1,564,172
November, 1920.....	1,417	271,828	996,049	-----	310,763	-----	-----	1,580,057
December, 1920.....	30	288,814	118,338	-----	589,214	230,738	98,124	1,325,303
January, 1921.....	-----	498,617	746,313	-----	608,296	445,093	93,148	2,388,467
February, 1921.....	-----	163,877	333,282	3,068	146,528	-----	68,561	715,316
March, 1921.....	10,000	555,615	455,552	-----	617,413	-----	51,200	1,689,780
April, 1921.....	239,152	277,234	3,092,834	-----	1,919,876	-----	10,000	5,539,096
May, 1921.....	3,339	26,330	2,856,167	-----	1,492,490	45,023	1,500	4,424,839
June, 1921.....	986,106	75,056	2,800,201	-----	1,410,139	67,197	18,001	5,356,699
Total.....	1,485,602	2,308,679	13,316,671	3,068	7,979,557	1,140,407	650,932	26,884,916

EXHIBIT NO. 15—BUSHELS INSPECTED "OUT" OF ALL PRIVATE ELEVATORS OF THE DIFFERENT KINDS OF GRAIN FOR THE YEAR 1920—1921.

Month.	Winter Wheat— Bushels.	Spring Wheat— Bushels.	Corn— Bushels.	Kaffir Corn and Milo Maize— Bushels.	Oats— Bushels.	Rye— Bushels.	Barley— Bushels.	Total— Bushels.
July, 1920.....	1,235,735	101,149	2,882,076	73,563	2,815,761	216,826	162,328	7,487,438
August, 1920.....	5,340,712	151,367	3,235,647	38,537	3,640,289	436,924	142,485	12,985,952
September, 1920.....	2,955,528	286,594	2,760,822	31,668	2,935,927	432,898	214,210	9,617,647
October, 1920.....	759,967	208,441	6,129,575	17,168	2,573,969	699,979	372,074	10,761,173
November, 1920.....	642,918	142,656	5,154,706	46,211	2,775,759	81,030	348,800	9,222,110
December, 1920.....	397,723	1,444,700	3,093,224	18,676	3,111,730	422,207	463,784	8,952,044
January, 1921.....	289,942	468,130	6,449,394	47,145	2,878,875	114,064	371,423	10,618,973
February, 1921.....	336,606	126,455	7,564,133	63,194	1,937,658	93,782	217,535	10,339,293
March, 1921.....	628,716	601,365	9,281,896	42,415	4,435,159	82,262	201,598	15,273,321
April, 1921.....	814,032	293,518	5,147,203	56,375	3,562,994	73,093	97,468	10,044,593
May, 1921.....	1,170,128	271,490	6,839,518	101,562	3,638,219	89,106	242,632	12,352,955
June, 1921.....	656,292	170,375	11,495,032	22,162	4,932,198	32,525	122,673	17,481,257
Total.....	15,228,299	4,266,300	70,063,136	558,676	39,238,429	2,774,606	2,957,310	135,086,756

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EXHIBIT NO. 16—COMPARATIVE STATEMENT OF "IN" INSPECTION FROM THE YEAR 1891 TO JUNE 30, 1921, INCLUSIVE.

Year.	Number of cars.	Number of boats.	Winter Wheat—bushels.	Spring Wheat—bushels.	Corn—bushels.	Kafir Corn and Milo Maize—bushels.	Oats—bushels.	Rye—bushels.	Barley—bushels.	Total bushels "In" inspection.
1891.....	277,216	.....	27,793,776	15,127,138	68,283,523	.....	75,404,372	8,185,375	11,042,163	205,836,347
1892.....	320,572	.....	24,223,568	22,439,096	86,139,535	.....	85,779,104	9,972,900	13,931,020	246,726,243
1893.....	271,047	.....	17,914,303	23,772,064	85,135,925	.....	75,294,700	1,606,853	12,962,400	215,898,245
1894.....	217,207	.....	27,200,900	3,055,360	71,590,220	.....	65,932,650	1,036,550	11,369,775	181,069,455
1895.....	204,616	.....	11,023,123	9,751,617	71,782,273	.....	76,393,690	1,164,308	9,578,184	179,695,165
1896.....	306,445	.....	13,642,409	22,490,117	109,961,630	.....	106,085,406	2,231,907	10,845,807	264,216,826
1897.....	310,959	.....	11,085,769	11,531,703	122,758,455	.....	113,741,310	3,700,526	14,577,602	277,395,266
1898.....	326,877	.....	18,554,026	24,418,464	126,198,096	.....	111,496,472	4,529,933	14,493,698	299,752,717
1899.....	314,186	.....	8,713,491	27,808,304	133,480,471	.....	117,180,869	4,837,436	15,451,162	301,974,149
1900.....	271,896	.....	24,382,736	16,874,340	126,033,039	.....	109,335,863	1,669,795	13,368,386	291,874,149
1901.....	213,426	.....	21,714,770	12,872,885	99,784,782	.....	95,123,311	1,816,793	9,840,482	241,185,033
1902.....	145,635	.....	22,762,729	8,719,206	51,278,193	.....	75,389,520	1,669,795	11,894,732	172,980,429
1903.....	191,970	.....	15,335,822	6,474,096	109,573,460	.....	81,873,025	2,776,140	12,904,732	230,240,737
1904.....	162,436	.....	14,759,580	4,387,000	92,487,930	.....	81,873,025	3,761,028	13,203,606	199,698,135
1905.....	191,156	.....	16,432,633	3,668,468	119,061,042	.....	94,247,078	1,804,877	14,015,940	246,698,876
1906.....	191,406	.....	26,073,950	4,516,520	110,851,743	.....	102,090,435	1,734,550	12,007,896	257,214,394
1907.....	191,727	69	23,349,451	5,446,728	130,765,891	.....	103,070,520	2,354,100	11,832,858	276,919,648
1908.....	161,992	52	18,212,521	5,654,217	91,485,356	.....	90,989,040	1,980,132	21,332,819	229,653,665
1909.....	161,712	63	18,653,622	8,174,871	92,914,920	.....	88,347,231	1,462,758	23,685,170	233,238,372
1910.....	173,653	4	23,544,803	7,992,819	106,042,637	193,916	100,042,026	1,095,964	15,277,030	254,494,166
1911.....	123,444	5	7,092,926	2,681,112	85,922,991	514,041	83,785,560	519,486	11,474,918	168,375,076
1912.....	177,143	9	30,772,427	4,985,471	109,654,024	825,588	142,682,796	1,784,728	18,274,834	255,797,359
1913.....	251,951	51	24,153,104	12,935,338	126,065,776	1,259,167	126,065,776	2,116,266	26,519,000	336,761,567
1914.....	163,005	21	41,443,750	9,187,113	95,964,089	328,500	84,490,799	1,951,400	20,957,550	259,323,171
1915.....	234,262	11	84,277,840	7,309,013	106,079,804	1,412,000	128,809,237	2,032,400	18,272,800	348,763,184
1916.....	205,342	6	51,650,000	19,092,492	88,025,000	3,940,400	120,157,500	4,054,000	20,996,800	307,754,792
1917.....	173,083	6	26,228,466	5,771,733	85,918,250	460,625	133,040,000	3,283,700	20,725,200	276,429,974
1918.....	128,333	.....	8,629,416	3,059,046	63,652,546	754,889	110,485,518	3,013,000	15,642,000	205,236,415
1919.....	182,335	.....	55,456,010	16,356,798	74,413,297	689,530	103,796,010	7,464,000	23,941,800	282,116,445
1919-1920.....	130,387	2	55,890,800	9,216,200	65,698,800	2,177,000	70,201,997	4,076,400	11,633,310	218,844,107
1920-1921.....	133,660	10	16,915,680	6,148,524	109,333,530	1,565,850	73,490,644	3,260,400	7,985,320	218,719,948

EXHIBIT NO. 17—COMPARATIVE STATEMENT OF "OUT" INSPECTION AND COMBINED "IN" AND "OUT" INSPECTION FROM THE YEAR 1891 TO JUNE 30, 1921, INCLUSIVE.

Year.	Winter Wheat.	Spring Wheat.	Corn.	Kafir Corn and Milo Maise—bushels.	Oats.	Rye.	Barley.	Total "out" inspection.	Combined total of "in" and "out" inspection.
1891.	23,127,995	8,048,566	41,218,975		14,161,975	5,573,607	2,079,177	94,200,883	300,046,230
1892.	21,970,222	16,786,771	46,149,499		18,644,499	2,335,719	1,840,992	107,917,610	354,643,902
1893.	17,183,320	10,911,263	62,014,748		16,064,748	276,180	1,320,529	106,170,502	324,088,747
1894.	7,346,455	12,075,388	40,284,142		10,143,142	229,820	933,568	71,012,542	252,081,907
1895.	15,889,909	3,266,447	40,640,447		16,423,038	207,734	601,421	86,042,420	365,737,585
1896.	17,623,079	10,666,573	72,529,549		17,990,581	949,268	831,556	120,886,620	384,401,452
1897.	11,233,913	24,882,404	87,744,100		20,767,610	3,110,677	1,174,346	148,913,050	425,308,415
1898.	15,861,507	28,626,793	102,292,871		13,933,890	5,103,160	936,624	166,864,835	466,617,552
1899.	2,556,305	29,401,967	105,810,587		10,683,499	3,222,747	1,519,530	153,204,635	454,476,358
1900.	17,973,565	24,124,720	102,749,483		14,131,566	1,615,527	289,613	170,784,374	462,758,523
1901.	24,429,896	27,323,028	75,426,170		19,807,520	1,229,260	321,242	148,337,116	389,492,140
1902.	23,196,709	19,782,300	50,565,365		18,214,523	2,946,749	301,534	115,007,170	297,937,599
1903.	19,105,468	13,041,875	93,001,543		26,047,154	3,892,765	3,388	184,092,143	384,332,880
1904.	12,369,917	7,850,449	76,266,010		24,318,997	1,020,919	485,041	121,311,333	312,004,438
1905.	13,314,083	1,599,638	98,340,847		32,063,821	1,476,268	830,487	148,224,069	394,938,547
1906.	22,846,402	6,748,156	80,978,194		37,326,543	1,031,437	1,443,067	160,368,709	407,583,163
1907.	25,597,500	2,847,622	90,652,323		26,071,180	1,604,834	474,953	147,248,481	424,168,029
1908.	30,747,723	3,146,811	65,931,050		38,382,954	1,096,623	389,810	139,695,011	369,348,896
1909.	24,589,377	6,306,319	63,069,857		22,117,216	745,223	1,366,168	118,183,160	351,431,532
1910.	17,957,364	7,450,662	78,431,128		32,766,238	333,893	64,361	134,023,648	388,517,843
1911.	11,155,057	1,505,264	60,591,840	114,774	29,304,610	43,368	22,932	102,737,828	271,112,901
1911-1912.	31,565,413	3,152,271	76,260,276	125,000	33,830,887	344,741	151,442	146,430,030	401,227,889
1912-1913.	31,250,535	12,795,013	79,131,644	166,459	41,132,332	560,269	916,971	168,942,733	502,704,260
1913-1914.	41,658,876	6,713,000	66,291,842	165,263	47,619,266	477,965	276,429	162,360,431	421,713,002
1914-1915.	86,556,709	1,595,266	76,188,634	87,773	76,890,530	256,893	3,983,461	243,469,246	692,252,430
1915-1916.	36,249,456	19,140,126	62,962,693	734,507	70,197,411	2,060,476	996,268	182,265,256	490,020,048
1916-1917.	21,948,287	1,776,572	48,604,641	387,235	82,647,747	1,017,500	1,531,661	157,089,583	433,619,527
1917-1918.	8,230,609	1,201,622	27,601,258	86,902	76,434,923	2,156,368	1,923,268	114,535,963	319,771,778
1918-1919.	65,198,237	4,412,359	46,706,645	226,680	86,876,616	7,048,916	10,038,575	220,106,931	602,223,378
1919-1920.	54,078,511	8,253,842	27,176,224	383,263	69,763,680	6,098,573	6,098,573	152,422,165	371,266,262
1920-1921.	16,713,901	6,574,979	83,379,807	561,744	47,217,986	3,915,013	3,068,242	161,971,672	380,691,630

DIVISION OF GRAIN INSPECTION.

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EAST ST. LOUIS DIVISION.

"IN" INSPECTION—CARS.

July 1, 1920 to June 30, 1921.

Months.	Wheat.	Corn.	Oats.	Rye.	Kaffir Corn.	Total.
July, 1920.....	881	720	255	15	-----	1,890
August, 1920.....	970	218	272	21	-----	1,481
September, 1920.....	871	488	412	12	-----	1,783
October, 1920.....	524	440	334	8	-----	1,306
November, 1920.....	372	369	181	-----	-----	922
December, 1920.....	362	463	323	1	-----	1,149
January, 1921.....	384	520	523	1	15	1,443
February, 1921.....	367	482	314	1	7	1,171
March, 1921.....	386	492	410	-----	11	1,308
April, 1921.....	421	196	233	1	8	859
May, 1921.....	493	1,045	512	4	14	2,068
June, 1921.....	403	609	498	-----	11	1,581
Total.....	6,434	6,111	4,276	64	66	16,951

"OUT" INSPECTION—CARS.

July 1, 1920 to June 30, 1921.

Months.	Wheat.	Corn.	Oats.	Rye.	Kaffir Corn.	Total.
July, 1920.....	139	131	20	-----	-----	290
August, 1920.....	139	139	86	-----	-----	364
September, 1920.....	46	136	50	2	-----	234
October, 1920.....	37	86	51	1	-----	175
November, 1920.....	41	87	170	-----	-----	298
December, 1920.....	41	41	62	2	-----	146
January, 1921.....	94	71	106	-----	5	275
February, 1921.....	75	72	147	1	-----	295
March, 1921.....	116	25	107	-----	12	260
April, 1921.....	32	51	87	3	9	182
May, 1921.....	27	69	81	5	8	190
June, 1921.....	19	115	106	-----	11	250
Total.....	806	1,023	1,071	14	45	2,959

"SPECIAL AND RE-INSPECTIONS"—CARS.

July 1, 1920 to June 30, 1921.

Months.	Wheat.	Corn.	Oats.	Kaffir Corn.	Total.	Sacks.	Wagons and Trucks.	Bins—Bushels.
July, 1920.....	48	36	7	-----	91	500	-----	-----
August, 1920.....	24	22	19	-----	65	10,027	-----	-----
September, 1920.....	36	33	12	-----	81	-----	4	-----
October, 1920.....	18	24	10	-----	52	880	1	-----
November, 1920.....	19	18	6	-----	38	-----	1	-----
December, 1920.....	17	22	8	-----	47	-----	-----	-----
January, 1921.....	11	37	12	-----	60	-----	2	-----
February, 1921.....	17	25	17	-----	59	-----	6	-----
March, 1921.....	21	20	8	4	53	-----	-----	-----
April, 1921.....	23	10	8	1	42	-----	-----	28,000
May, 1921.....	18	21	8	-----	47	-----	2	-----
June, 1921.....	11	45	16	1	73	-----	1	-----
Total.....	263	306	131	6	706	11,407	17	28,000

"RECAPITULATION."

Total cars, "In" Inspection.....	16,951
Total cars, "Out" Inspection.....	2,959
Total cars, "Special and Reinspection".....	706
Total cars inspected.....	20,518

PUBLIC UTILITIES COMMISSION.

FRANK L. SMITH, *Chairman*;
CICERO J. LINDLY,
HAL W. TROVILLION,
P. H. MOYNIHAN,
JAMES F. SULLIVAN,
Commissioners.

JULIUS JOHNSON, *Secretary.*

EXECUTIVE SECTION.

A report having been rendered by the previous commission for the six months ending December 31, 1920, the following is a continuation and covers the period from January 1, 1921, to June 30, 1921.

The old commission retired shortly after the advent of the present State administration. On February 3, 1921, Hon. Cicero J. Lindly of Greenville was appointed Acting Chairman, with Hon. Hal W. Trovillion of Herrin, Hon. P. H. Moynihan of Chicago, and Hon. James F. Sullivan of Chicago, Commissioners and Julius Johnson of Moline, Secretary. Commissioner Dempcy of the old commission continued to serve until April 6, 1921, at which time he was succeeded by Hon. Frank L. Smith of Dwight, who was designated as Chairman.

During the six months covered by this report the commission has issued approximately 966 orders, the subject matter affected by them involving the widest range of public utility questions. These, for the purpose of this report, have been classified under convenient general heads so that they might be presented to indicate substantially the nature and scope of the regulatory measures contained herein. These orders represent the opinions and decisions arrived at by the commission after thorough investigation and examination of the evidence presented at formal hearings, a few cases having been disposed of informally either because of agreement of the parties interested, or because the issues were uncontested. The classification follows:

ORDERS.

Suspending rates	227
Affecting increases and reductions in rates.....	37
Approving intercorporate agreements, etc.....	150
Requiring service	66
Authorizing the issuance of securities.....	93
Dismissing minor complaints.....	105
Approving the purchase and sale of property.....	43
Granting certificate of convenience and necessity.....	39
Requiring reparation of excessive charges.....	66
Approving leases	58
Affecting grade crossings and protection thereof.....	14
Citations issued for non-compliance with orders.....	29
Amending and modifying orders.....	19

Among the orders included in the above capitulation at least two seem to merit special mention in this report, both because of their far-reaching effect in the field of utility regulation, and because the principles therein announced constitute in a large degree departures from what has been the policy of the former commissions in similar cases.

In Docket Case No. 8176, involving an application of the Central Illinois Public Service Company for a temporary increase in electric rates to cover an alleged emergency, the petition was denied on February 23, 1921. In its opinion the commission, while recognizing the validity of temporary rates in emergency proceedings in general, laid down the clearly defined rule of an "emergency" in the following terms:

A sudden or unexpected happening; an unforeseen occurrence or condition; specifically, a perplexing contingency or complication of circumstances.
A sudden or unexpected occasion for action; exigency; pressing necessity.

It appeared that the petitioner's proofs fell far short of coming within this definition as above set forth, which is radically different from rulings of the former commission in the requirements of what the showing should be to legally warrant a temporary advance in rates. The commission's decision of this case virtually marks a turning point in the trend of increase in utility rates in this State. While economic factors have undoubtedly contributed somewhat toward this stable condition, still it may be fairly said that this ruling of the commission was chiefly responsible for the halt in a persistent demand for increase in rates.

The order issued by the commission on June 30, 1921, in Docket Case No. 10680, pertaining to the Homer Electric Light and Power Company, granted this utility the right to construct an electric transmission line over a rural highway already occupied by the lines of a telephone company. The conclusions arrived at definitely settle the proposition that prior occupancy of a highway by any utility company confers no monopoly for such company for the future. In the opinion of the commission, when the prosperity and growth of communities demand service of a new and different character along a highway already occupied by another company, the latter must recognize the right of the newcomer to share the road so long as the operations are so conducted as to prevent unreasonable interference with the other. In other words, the "superior right" which accrues to a utility by reason of "prior occupancy" is confined to a right to protection from substantial interference such as would render its service uncommercial, and not merely such interference as might be an impairment of its service, which latter position had been hitherto persistently urged on behalf of "prior occupants."

ENGINEERING DEPARTMENT.

Electric Division.—In my last annual report I showed that for the year ending June 30, 1919, there was available for the use of this division a total of 72 man months. For the year ending June 30, 1920, we

had available 57 man months. For the year ending June 30, 1921, we had available 64 man months. This shows that while we had available during the last year 11 per cent more time of assistants than during the year before, that we were still not as well situated as we were during the year ending June 30, 1919. At the same time the majority of our present force consists of men who have not been with the commission a long enough time thoroughly to acquaint them with the work.

A review of the matters handled by this division during the year just passed shows that while we have not handled as many formal matters as were handled the year previous there has been a greater proportion of them of a nature which requires considerable time to be spent in investigations and office work.

General Order 59 of the commission was originally made effective on June 1, 1919. At a later date it was discovered that this general order was entirely inadequate to care for the situation in regard to furnishing service to rural consumers. This division accordingly undertook a revision of this general order which was under way at the time of the last annual report but had not then been completed. During this year this revision has been completed and passed by the commission as effective January 1, 1921.

As an aid to the commission in laying its requirements for appropriations before the legislature this division tabulated the value of all the utility property of electric and electric railway utilities in the State together with the number of consumers had by each and their annual operating expenses and revenues. The figures presented showed that the electric utilities represented an investment of \$346,977,974; that the electric railways represented an investment of \$411,619,306. The annual gross revenues for electric were \$66,457,415 and electric railway \$83,611,475; annual operating expenses, electric \$42,462,029, electric railway, \$64,959,455; electric consumers, 905,679; total fare passengers carried by electric railways 956,259,012. The whole tabulation which represents a total investment, including steam railways, of over nine billion dollars and serves a total number of consumers exclusive of fare passengers on steam and electric railways of considerably over three million.

The last legislature made appropriations which should be adequate to enable us to carry on the work before us satisfactorily and expeditiously. As a result of a number of recent orders of the commission many of the large utility companies in the State are under orders to present to the commission detailed inventories of their properties.

Telephone Section.—The work completed during the year ending June 30, 1921, has been of a very diversified nature. The evidence and exhibits submitted by the telephone utilities in rate cases has often been incomplete, and in several cases has been of practically no value in aiding in the determination of just and reasonable rates. It has therefore been

necessary for the telephone division to make very extensive investigations, and to submit in the records complete reports as to the value of the property involved, and the operating revenues and expenses connected with the furnishing of telephone service.

Local Exchange Telephone Service.—The telephone division has been handicapped in its efforts to require the telephone utilities to maintain adequate and satisfactory service because of a lack of trained telephone service investigators. The assistant utilities engineers connected with the telephone division have been engaged largely upon valuation work and the preparation of absolutely necessary unit cost data, thus preventing the full and complete field investigations which are necessary in order to understand service conditions properly, and to make the recommendations that will result in restoring the standard of service required by the commission.

Consolidations.—The consolidation of telephone properties resulting largely from purchase and sale has continued during the year covered by this report. The outstanding consolidation which was approved during the year, was the merging of the Bell Companies operating within the State into one operating company now known as the Illinois Bell Telephone Company. Only a small amount of Bell property is not included in the merger and this property furnishes service at only a few exchanges in the extreme southeastern portion of the State, and to the Bell exchanges located in Belleville and East St. Louis and owned by the Southwestern Bell Telephone Company. Another consolidation of interest, which occurred during the period covered by this report, was the purchase of certain small independent telephone companies located in the south portion of the State, by the Murphysboro Telephone Company.

Financing.—Failure promptly to finance the necessary rehabilitation of purchased property is resulting in complaints against the Murphysboro Telephone Company. Utility financing, which has always been a problem to managers and operators, is especially difficult at the present time, due to the excessive demand for additional capital, made necessary to make the deferred extensions, occasioned by the war period.

Rate Cases of the Chicago Telephone Company.—On December 20, 1920, the Public Utilities Commission approved an order increasing the rates for telephone service furnished by the Chicago Telephone Company in Chicago and the cities, towns and villages, served by the company in the Counties of Cook, DuPage, Kendall, Kane, Grundy, Lake, McHenry, and Will. The schedule of rates and charges as approved by the commission, permitted the placing in effect of a modified schedule of rates which are considerably lower than the rates asked for by the telephone company. The order fixed the fair value of the telephone property of the Chicago Telephone Company within the city of Chicago as \$70,000,000, and the value of the suburban property as \$15,792,508.

Following the placing in effect of the rates as approved by the order, the usual number of informal complaints have been filed by subscribers.

Valuations.—During the period covered by this report the telephone division prepared appraisals of 54 telephone properties. In 17 cases it was necessary to make a field count and to prepare a complete inventory, and in 37 cases the inventory, as submitted by the telephone utility was checked by an actual field investigation. This statement of valuations prepared does not include the work in connection with determining the cost of the property of the Chicago Telephone Company, neither does it include any work connected with the appraisal of the property of the Kinlock Telephone Company and the Kinlock Long Distance Telephone Company. Five assistant utilities engineers have been engaged in the checking of the physical property of the Kinlock Telephone Company and the Kinlock Long Distance Telephone Company for approximately six months time.

Without taking into consideration the value of the telephone property of the Chicago Telephone Company, and of the Kinlock Telephone Company, the reproduction cost new of the 54 properties appraised during the year is \$4,048,146, and the reproduction cost new less depreciation value is \$3,077,410. As indicating the extent and value of the properties of the Kinlock Telephone Company and the Kinlock Long Distance Telephone Company, located within the State of Illinois, the company has submitted an appraisal which estimates the cost new of the properties to be \$3,240,413, and the reproduction cost new less depreciation to be \$2,567,231. In addition to the valuation work actually completed during the year, the telephone division has completed the field check in connection with four exchanges belonging to the Illinois Bell Telephone Company and located in Cairo, Alton, Edwardsville and Centralia, and the office work in connection with the preparation of the appraisals of these properties is now being completed.

Practically all of the appraisals prepared during the year ending June 30, 1921, are based upon the reproduction cost method. During the year it became evident that a study should also be made of original cost in connection with telephone properties, and a change of methods from reproduction cost to original cost valuation is now being brought about. This change has involved a much larger outlay of time and effort on the part of the telephone division in making appraisals, due to the necessity of studying into the records of the telephone utilities involved in order to determine the actual cost of various items of property. The change has also involved the development of additional unit costs to meet the requirements connected with the use of both methods of valuation. The work of preparing unit costs has required the time of from one to four assistant utilities engineers during a considerable portion of the year.

On July 1, 1921, there were pending in the telephone division 73 formal cases affecting 201 separate local exchanges, and involving an estimated amount of work of 4,761 man days to complete. Of the 73 formal cases pending, 35 cases have been brought before the Commission and provisional orders approving the proposed rates, pending a complete investigation, have been entered.

Gas Division.—During the past year the gas division had difficulty in retaining the engineers it had in its division and also encountered difficulty in replacing the services of the men leaving, which considerably slowed up the work of the division. During the past year there were eleven men engaged for different periods on the staff of this division but the time devoted to this work was equivalent to five and one-half man years.

Service Division.—Investigations of service conditions have been made in several locations where rate cases were pending and reports submitted at hearings on such cases. Seventy-one investigations of this nature were made, while one hundred and twenty-nine investigations were made of informal complaints and forty investigations of a miscellaneous character. The more important of the investigations connected with formal cases were those relating to gas service at Sterling, Madison, Beardstown, and in the territories served by the North Shore Gas Company and the Western United Gas & Electric Company; the electric service conditions in Geneseo, Virden, Pittsfield, Collinsville, Huntley, Rockton, Henderson County, Blue Mound and Kaneville. Under miscellaneous investigations, I wish to mention particularly the inspection of the transmission line furnishing service to Adrian, Burnside, Colusa and Ferris, said inspections having been made for the purpose of determining whether the line had been constructed in accordance with the commission's rules; the investigation of the transmission line between Champaign and Mahomet which was constructed by the village of Mahomet and which caused considerable complaint from the Central Union Telephone Company and the Mahomet Telephone Company; and the investigations of lines and service in the territory served by the Rossville Electric Light Company. Other investigations of importance related to the matter of compliance with the commission's Rule 31 of General Order 20 by the Madison County Light & Power Company at Wood River; the complaint regarding unsatisfactory electric service at Freeport; the conditions of the distribution system at Longview; the billing practices used by the Central Illinois Public Service Company at Oblong; and the unsatisfactory electric service rendered at Stockton by the Stockton Electric Company. Investigations of these various matters required considerable time and effort and in each instance improvements in service were effected as a result of our efforts.

Many complaints are filed with the commission and those relating to service and the application of the commission's general orders are

handled in this division. During the past year 615 complaints have been referred to this division and properly disposed of. Many complaints have been investigated in the field but the majority have been handled by correspondence.

Heat Division.—During the year the division has completed twelve formal reports and has two others well advanced in preparation. Five of these reports relate to rate cases and seven to proposed abandonment of heating utilities, or to service matters. In respect to the reports upon matters other than rates, it is worthy of note that these exceed the rate cases in number, and undoubtedly they have occupied a larger share of the division's time. These reports are for the greater part a result of the efforts of the utility companies, notably the Central Illinois Public Service Company, to be relieved of the operation of a number of heating utilities, which, from the company's standpoint, are commercial failures. These heating utilities were purchased by their present owners in conjunction with local electric generating plants. With the development of long distance transmission energy, it became more economical for the company to discontinue these local generating stations and to supply electric current to the communities from their larger and more efficient power plants. As the local heat utilities were designed to operate upon exhaust steam, this change in method of electric operation has made them uneconomical propositions, from the utility's point of view. A very determined effort, therefore, is being made by the utility companies to discontinue the operation of these heating plants permanently.

In practically every case, consumers and municipalities object vigorously to the proposed discontinuance of central station heat. The objections are based on a number of grounds. Possibly the objection most frequently urged by consumers is the heavy expense to which they would be put in providing their premises with private heating plants, especially in view of the fact that in many instances, buildings have been constructed without chimneys and without basements, in the expectation that central station heat would be available at all times. The municipalities also have, in many instances, agreements with the utilities to furnish free heating service to municipal buildings, this service usually being furnished as a consideration for the grant of franchise rights. The legal point has arisen as to the right of the commission to interfere with the obligations incurred by the utility companies in connection with this free service. The propriety of allowing a utility to discontinue service prior to the expiration of its franchise is also questioned. The physical condition of the heating plant and distribution system is, in most cases, a point at issue. The questions brought up in connection with these cases, and the strong feeling aroused on both sides, has resulted in the reports of this division requiring a greater amount of time and care, in proportion to the values involved, than would be necessary in the ordinary rate case.

Water Division.—The volume of the work before the water division during the past year appears to be as great as shown by the preceding annual reports. During the year, a practically complete change occurred in the personnel of the division, including the division head, due to the fact that they were offered and accepted positions with higher salaries than the commission was allowed to pay under the appropriations, and at the present time but one assistant engineer has been with the division for a full year.

During the past year, a very considerable amount of time was spent in classifying, indexing and extending the cost data file of this division, and in the preparation of material for a central cost data filed for the office. This work is now sufficiently advanced so that the new classification of cost data is of practical use and it is expected that the use of this file will expedite and improve the quality of the work turned out by this division during the ensuing year. It is also expected that by careful filing and indexing of computations of unit costs made in the various cases, much duplication of work can be avoided and the work of the division thereby expedited.

Railroads.—In addition to the investigations of complaints, accidents, etc., this department has also conducted other investigations during the past year. An inspection of the physical condition of the planking and approaches of street crossings at grade with railroads have been made within the corporate limits in 34 cities having a total of 1,365 railroad crossings which have been inspected by our department. In all cases the railroads have notified us that they have made repairs to these crossings as outlined in our recommendations, these recommendations being such as to bring the planking flush with the top of rails, making a smooth crossing, and to bring the approaches to a grade of not more than 5 per cent within the right-of-way for a distance of not less than twenty-five feet on each side of the tracks.

Extra-Hazardous Crossings.—Since our annual report for the year ending June 30, 1920, the railroad companies have all reported compliance with General Order 55 in the erection of stop signs at extra-hazardous crossings and this matter has been checked up on certain railroads with a view of determining whether these signs have been placed properly. The reports of our inspectors indicate that railroad companies have erected these stop signs in question in the manner directed by the commission.

Section 145b of an act to amend an act entitled, "An Act to revise the law in relation to roads and bridges," filed June 29, 1917, states that all persons controlling the movements of self-propelled vehicles shall reduce the speed of such vehicles to a rate of speed not to exceed ten miles per hour upon approaching any highway crossing or railroad at grade and to come to a full stop at all such crossings where stop signs are placed. A fine of not to exceed ten dollars is provided for the

punishment of any one violating the same. However, the State does not provide an appropriation or any means to enforce this law and it is noted from reports of employees of this commission and various individuals, who travel a great deal throughout the State, that the traveling public generally pays no attention to these stop signs. Telegrams, letters and accident reports received at this office daily bear up this statement and reveal an appalling disregard for the ordinary precaution against accidents at crossings.

Rate Schedule.—The number of public utilities having rate schedules on file with this division on June 30, 1921, is shown in the following table:

Electric	226
Gas	66
Water	39
Heating	24
Warehouse	230
Elevator	63
Telephone and telegraph.....	819

Total 1,467

The number of telephone companies includes mutual companies having schedules on file.

During the 12 months covered by this report, 2,460 electric, gas, water, heat, telephone, telegraph and storage rate schedules were filed with the commission. One thousand two hundred and ninety-nine schedules previously filed were still pending, making a total of 3,759 schedules to be acted upon. Of this number, 3,271 have been acted upon, 1,501 becoming effective as filed, upon the recommendation of division engineers; 795 were approved by order as filed, after investigation and hearing; 490 were filed in compliance with orders establishing rates other than those proposed by the utilities; 488 schedules have not as yet been acted upon, the greater number of these being under suspension and the remainder in the hands of division engineers.

The following table shows the action taken on schedules during the twelve months' period from July 1, 1920, to June 30, 1921:

	Received during year.	Accepted without order.	Schedules of rates established by order.		Permanently suspended cancelled or dismissed.	Schedules upon which action has been taken.	Schedules upon which action is pending.
			Approved by order as filed.	Filed in compliance with order.			
Electric.....	642	256	405	78	168	907	297
Gas.....	214	3	18	154	173	347	28
Water and heat.....	84	21	47	17	24	109	38
Telephone and telegraph.....	1,421	1,169	281	241	117	1,808	132
Storage.....	99	53	44	.....	3	100	3
Total.....	2,460	1,501	795	490	485	3,271	488
Previously filed.....	1,299						
	3,759						

Of the number of telephone schedules received 868 were for service connection and related charges filed in conformity with General Order 67 of the commission. One hundred and twenty-seven telephone companies filed such rates. Considerable correspondence was necessary in order to have the companies refile schedules to comply with amendments to General Order 67. The greater number of other schedules filed were for changes in rates.

ACCOUNTING SECTION.

Authorization to Issue Securities.—The character of the work performed by this section during the past year relating to security issues has consisted of conducting hearings in security cases, checking exhibits submitted by petitioners in support of their applications, examining mortgages or trust deeds, preparing tentative orders for presentation to the commission, and checking the periodic reports rendered by utilities showing the disposition of the securities authorized to be issued and the application of the proceeds realized therefrom.

In addition to the work of disposing of applications that were filed with this commission, this section has examined copies of a large number of similar applications filed with the Interstate Commerce Commission involving security issues of steam railroad companies for the purpose of ascertaining whether or not it was deemed necessary that any representations should be made to the Interstate Commerce Commission in behalf of the State in respect to any matters involved.

During the year ending June 30, 1921, the commission entered 178 orders authorizing the issuance of securities. The total amount and the various classes of securities authorized to be issued are as follows:

Kind of security.	Amount authorized. (Par value.)	Fees charged.
Capital stock	\$21,352,037.00	.....
Bonds	86,306,896.80	\$54,613.10
Notes and other securities.....	45,968,562.24	39,499.87
Total	\$153,627,496.04	\$94,112.97

During the year ended June 30, 1920, the commission entered 202 orders authorizing the issuance of securities. The total amount authorized is as follows:

Kind of security.	Amount authorized. (Par value.)	Fees charged.
Capital stock	\$ 10,094,993.33	.....
Bonds, notes and other securities.....	\$262,707,600.89	\$198,936.35
Total	\$272,802,594.22	\$198,936.35

During the period from January 1, 1914, to June 30, 1921, the Commission entered 1,227 orders, authorizing the issuance of securities aggregating \$2,214,866,322.25, or an average of \$1,805,107 an authorization, and an annual average of 163 orders entered and \$295,315,511 of securities authorized.

It will be noted that the amount authorized during the past year is approximately \$119,000,000 less than the amount authorized during the preceding year. This decrease is chiefly attributable to the provisions of

the Transportation Act, 1920. Under the provisions of this act, jurisdiction over the issuance of securities by carriers subject to the act was conferred upon the Interstate Commerce Commission. A number of roads, however, filed their applications with the Illinois Commission as well as with the Interstate Commerce Commission, and thus added to the validity of the securities issued any additional safeguards that the approval of the Illinois Commission might afford. The amount of fees charged to steam railroads during the past year for authority to issue securities was \$57,391.00. During the preceding year the amount was \$172,608.78. Authorizations to issue securities granted to steam railroads during the past year amounted to \$79,321,000; during the preceding year the amount authorized was \$214,560,935.

The tabulation below shows the amount of securities which each class of utility was authorized to issue during the year:

Steam railroads	\$79,321,000.00
Electric railroads	12,749,410.40
Electric utilities	19,688,600.00
Gas utilities	200,000.00
Heating utilities	172,200.00
Water utilities	2,917,100.00
Combined utilities	18,623,770.64
Telephone	18,168,315.00
Warehouse	1,255,700.00
Grain elevator	5,000.00
Steamboat	158,000.00
Motor Bus	368,400.00
Total	\$153,627,496.04

The law specifies the purposes for which securities requiring the authorization of the commission may be issued.

The following tabulation shows the amount of securities authorized for each of the purposes specified:

Acquisition of property.....	\$37,043,879.16
Construction, extensions, etc.....	60,497,016.88
Discharge of lawful refunding of obligations.....	35,780,600.00
Total	\$133,321,496.04

Investigations Pertaining to Rate Determinations.—The examiners of accounts of the accounting section have been constantly engaged during the year in the audit of books and records of utilities in connection with proceedings involving the determination of rates for service. A large number of such audits and investigations have been made during the past year than during any previous year of the commission's existence. The purposes which these audits and investigations are designed to accomplish may be briefly stated as follows:

- (1) Secure a record of the amount of capital which has been invested in the property devoted to public service, the cost of various classes of property, the items of property retired and the cost thereof, and also the amount of funds used and necessary for working capital.
- (2) Ascertain the actual operating expenses and taxes and the amount of gross income and net income resulting from the operation of the property under existing rates.
- (3) Obtain a survey of the traffic or service rendered, analyzed in such manner as will furnish an adequate basis for the construction of rate schedules that will be fair and equitable to all patrons and that will yield the required net income. Statistical tables prepared in connection with such surveys are so constructed as to afford a basis for an accurate estimate of the amount of income that may be expected to result from the application of any rates which may be under consideration.

Supervision of the Accounts of Utilities.—In order to carry out the provisions of the law pertaining to the accounts of utilities, uniform systems of accounts were established or adopted for almost all classes of utilities prior to the past year. In 1918 uniform systems for electric, gas, heating and water utilities were prepared by this section, which were adopted by the commission and made effective January 1, 1919. The adoption of uniform systems of accounts is intended to effect uniformity in the accounting methods and practices of utilities, and to render records available that will show investments, revenues and expenses in such detail, and grouped in such manner, as will best serve the purposes of rate regulation.

Mention was made in our report of the preceding year that the Accounting Committee of the National Association of Railways and Utilities Commissioners was formulating a system of accounts for electric and gas utilities, which should be standard throughout the United States. The committee, of which the Chief Accountant of this commission was a member, completed its work during the year, and submitted its report to the association at its meeting in the fall of 1920. The system was tentatively adopted by the association. Such a system if adopted by the several states and thus made applicable to the entire country would more readily permit of comparisons between operations of like utilities in different states, and in this respect would be particularly useful to those companies that own or control utility properties so situated.

Forms for annual report were sent during the year to all utilities of record engaged in serving the public in some capacity, or incorporated or organized for the purpose of rendering service. The number of such reports to be filed by each of the various classes of utilities covering the year ended December 31, 1920, is shown in the following tabulation:

Steam railroad companies (operated properties).....	142
Electric railroad companies (operated properties).....	91
Steamboat lines	21
Express companies	2
Sleeping car companies.....	1
Non-operative railroad companies (steam and electric).....	47
Motor bus lines.....	12
Electric light and power companies.....	215
Gas companies	60
Heating companies	23
Water companies	42
Warehouse and storage companies.....	218
Grain elevators	42
Telegraph and cable companies.....	3
Telephone companies	787

Total 1,706

Checking the annual reports submitted by utilities requires a large amount of work and correspondence. The work performed in this connection may be subdivided into the following:

- (1) Verifying the accuracy of the reports.
- (2) Determining whether the information submitted is sufficient or insufficient.

Statistical.—During the early part of the past year the statistical report for the year 1918 was completed. A similar report for the year

1919 was nearly completed at the close of the year. These reports when printed will contain approximately 900 pages of statistical data, pertaining to the affairs of the various classes of utilities. The information contained in these reports is abstracted from annual reports rendered to the commission.

Shortly after the close of the year 1920, special report forms were sent to electric, gas, heating and water utilities, electric railways and telephone companies (except small telephone companies), for receiving preliminary returns of these utilities covering their operations during the year 1920. From these reports a special statistical report was compiled, showing a comparison between the results of operation and return on investment in 1920 and the results of operation and return on investment in 1914. These preliminary reports afford the medium of observing the trend of utility operations in advance of the filing of the regular annual reports covering the same period.

In addition to the regular statistical work indicated above, numerous requests are received each year from the general public, for information of one kind or another pertaining to public utilities.

SECTION RATES AND TARIFFS.

In my annual report for the year ended June 30, 1920, a synopsis is given of the status of the freight and transportation rates of the common carriers of this State.

At the time that report was submitted, the railroads were under the jurisdiction of the United States Railroad Administration and the Public Utilities Commission was without jurisdiction over the Illinois freight and passenger rates of the common carriers of this State.

On February 29, 1920, Congress approved the "Transportation Act, 1920," and returned the railroads to their owners after the Federal Government had lost many million dollars in the operation of the railroads. This was due principally to the substantial increase in the cost of materials, supply, and labor without a corresponding increase in the then existing freight and passenger rates. July 31, 1920, by decision of the United States Railroad Labor Board, the wages of the railroad employees were again materially increased. In preparing for the return to private control with large deficits facing their owners there arose upon petition of the owners the most important rate case in the history of this country.

After investigation it was found necessary by the Interstate Commerce Commission to increase the freight rates materially to provide sufficient revenue to pay operating expenses, including taxes and an allowance for depreciation, and provide a return of 6 per cent on the value which the Interstate Commerce Commission had placed upon the property. (*58 I. C. C. 220*, decided July 29, 1920).

Following the decision of the Interstate Commerce Commission (without dealing with the intervening decisions of the Illinois Public Utilities Commission) on October 18, 1920, by Order 10620, the Public

Utilities Commission authorized an increase of 35 per cent in the then existing intrastate freight rates and the petition for an increase in passenger rates was dismissed for want of jurisdiction.

The carriers appealed to the Interstate Commerce Commission under the "Transportation Act, 1920," for removal of an alleged discrimination between intrastate and interstate freight and passenger rates. This resulted in the Interstate Commerce Commission issuing an order November 13, 1920, and January 11, 1921, (*59, I. C. C. 350* and *60 I. C. C. 92*, respectively) finding discrimination and authorizing the carriers to remove such discrimination by increasing the intrastate passenger rates 20 per cent and the intrastate freight rates 40 per cent. Whereupon the carriers applied to the United States District Court, Northern District of Illinois, Eastern Division, for an injunction to prevent the Illinois commission from enforcing the two cent fare law, and its order of October 18, 1920, limiting the increase in freight rates to 35 per cent. Such an order was issued by the Court February 14, 1921.

Under the order of the court, the Public Utilities Commission is prevented from entertaining complaints concerning the rates of charges being applied by the railroads of the State of Illinois for the transportation of persons and property.

DIVISION OF STANDARDS.

ROBERT F. ADAMS, *Superintendent of Standards.*

The period covered by this report has been very largely devoted by this division to the annual inspection of weights and measures in the various State institutions as provided by law, and to the testing of gasoline measuring devices encountered in traveling from one institution to another.

During this period 30 inspections were made of weights and measures of State institutions, and 5 inspections of similar devices of the State normal schools, and of the University of Illinois. The Chicago Grain Office weights and measures were inspected, and one private inspection was made. Ancillary to the inspection of the Chicago Grain Office, 109 scales in elevators in Chicago were examined and pronounced accurate. While journeying from one State institution to another 355 gas measuring devices were examined and four were condemned for repairs. This division collected \$175.50 for the examination of these gas measuring devices.

Some time has been spent in collecting data for the purpose of presenting to the General Assembly convening in January of 1921, for its consideration in the enactment of an adequate weight and measure bill. Since the attempt was made two years ago to secure the enactment of such a law, the Federal Congress has, through the Kenyon bill, spoken on the question, and that seems to have swept away the opposition that prevented the enactment of such a law two years ago. Such a bill was prepared by this division and delivered to Representative E. B. Bentley of Clinton, for introduction, known as House Bill 687. Without much opposition this bill passed the House and the Senate, having been amended in some minor particulars, and now Illinois, for the first time, has joined the other states in the crusade for better weights and measures prevailing throughout the respective commonwealths.

The law on this subject, until this bill became a law, was archaic and incapable of proper enforcement. The proposed law is a most complete one and is said by those who have inspected it, to be one of the most effective laws in force in any State in the Union.

This law requires cities of 25,000 or more, which have not already provided by ordinance for inspection of weights and measures, to prepare at once such an ordinance on the subject, and to take over this question as a matter of "home rule." In most parts of the State, outside of such cities, enforcement of the law is placed in the Department of

Trade and Commerce, thus centralizing responsibility and power in this respect and making it possible to have absolute uniformity in weights and measures throughout the State.

Under the former law, the enforcement of the act was in the hands of county clerks, and because of their multitudinous duties and the character of the work generally performed by them, as a result only eight county clerks were, out of the total of 102 counties in the State, supplied with the necessary paraphernalia for inspecting weights and measures. Therefore, no adequate supervision was had.

While the prices of commodities are and remain high, it is increasingly important that the consumer receive full weight for commodities purchased.

The Director of Trade and Commerce has assigned the direct supervision of this law to the Superintendent of Standards. There will be eight inspectors, each of whom will be located in some central part of each of the eight districts in the State, and these inspectors will travel in their respective districts testing weights and measures where other supervision is not had. These inspectors will report to the Superintendent of Standards who will be located in the State House at Springfield.

It is quite likely that the division of the State into eight districts as above stated will result in the following:

District No. 1 includes Lake County and Cook County outside of the city of Chicago, and in addition thereto the counties of DuPage, Kane, McHenry and Will, comprising the eleventh congressional district.

District No. 2 includes the counties of Boone, Carroll, DeKalb, Grundy, JoDaviess, Kendall, LaSalle, Lee, Ogle, Stephenson, Whiteside and Winnebago, comprising the twelfth and thirteenth congressional districts.

District No. 3 includes the counties of Adams, Fulton, Hancock, Henderson, Henry, Knox, McDonough, Mercer, Rock Island, Schuyler and Warren, comprising the fourteenth and fifteenth congressional districts.

District No. 4 includes the counties of Bureau, Ford, Livingston, Logan, Marshall, McLean, Peoria, Putnam, Stark, Tazewell and Woodford, comprising the sixteenth and seventeenth congressional districts.

District No. 5 includes the counties of Champaign, Clark, Coles, Cumberland, DeWitt, Douglas, Edgar, Iroquois, Kankakee, Macon, Moultrie, Piatt, Shelby and Vermilion, comprising the eighteenth and nineteenth congressional districts.

District No. 6 includes the counties of Brown, Calhoun, Cass, Christian, Greene, Jersey, Macoupin, Mason, Menard, Montgomery, Morgan, Pike, Sangamon and Scott, comprising the twentieth and twenty-first congressional districts.

District No. 7 includes the counties of Alexander, Bond, Franklin, Jackson, Madison, Monroe, Perry, Pulaski, Randolph, St. Clair, Union, Washington and Williamson, comprising the twenty-second and twenty-fifth congressional districts.

District No. 8 includes the counties of Clay, Clinton, Crawford, Edwards, Effingham, Fayette, Gallatin, Hamilton, Hardin, Jasper, Jefferson, Johnson, Lawrence, Massac, Marion, Pope, Richland, Saline, Wabash, Wayne and White, comprising the twenty-third and twenty-fourth congressional districts.

It is hoped that when this law is in full operation, it will result in great benefit to the people of this State, and active work in this respect will be commenced not later than September 1, 1921.

WEIGHTS AND MEASURES—JULY 1, 1920, TO JUNE 30, 1921.

Number of inspections of weights and measures of State institutions.....	30
Number of inspections of weights and measures of State normal schools and University of Illinois.....	5
Total	35
Number of private inspections.....	1
Chicago Grain Office.....	1
Elevators in Chicago (109 scales).....	28
Number of gas measuring device examinations.....	355
Number of gas measuring devices condemned for repairs.....	4
Amount of fees collected from gas measuring device examinations.....	\$175.50

DIVISION OF SMALL LOANS.

During the period reported upon, that is from July 1, 1920, to June 30, 1921, the activities of this division have been very largely devoted to routine matters, in connection with the administration of this law. Not much of note or worthy of special mention has occurred during this time.

The American Industrial Licensed Lenders Association, a national association of licenses under this or similar acts in the various states, held its annual meeting in Indianapolis in September, 1920, and invited a representative from this State to attend its sessions. The examiner of this division was delegated to attend the conference as the representative of this State.

The department has endeavored to cause the office of each licensee to be examined at least twice each year. During this fiscal year there have been 173 examinations made of which 66 were made in Cook County and 107 down State. For this same period 60 licenses have been issued to Cook County applicants and to down State applicants 81, making a total of 141, or eight more than were in full force and effect on June 30, 1920. Removal consents have been secured by seven licensees in Cook County and three down State. During this entire period three licenses were cancelled in Cook County and one down State. In the preceeding three annual reports of this division the law and the rulings thereon arising from its administration, have been repeatedly referred to and reviewed. Therefore, it is not believed wise to refer to such matters in this report. Reference to such reports for such matters may be had, if desired.

The administration of this law in Illinois, and the rulings promulgated by this department have brought to the borrower and the lender alike, almost uniform satisfaction. So much so, that when other states have come to consider the advisability of enacting such a law in their state, they have conferred with this department concerning the advisability of such proposed legislation. In three such states, namely: Michigan, Iowa and Minnesota, the civic organizations, which fostered the bill pending before the legislatures in those states, invited the Assistant Director of this department to attend committee hearings at which time the proposed bill in the respective states was under consideration, and this department believing that the administration of this law in this

State had resulted in great benefit to its citizens, decided to send the Assistant Director who had been for three years in active charge of the enforcement of the law here, to the cities of Lansing, Des Moines and St. Paul, accepting the invitation of these various societies who were interested in the enactment of a similar law in their states. It may be noted here that the statements made by the representative of this department in these hearings were carefully and considerably received, the legislators being extremely desirous of securing all data and information possible upon the subject, and as to the practical working of such a law.

It should be noted in passing that Michigan and Iowa acted favorably upon the bills pending upon this subject. Minnesota failed to enact a law upon the subject.

The licensees in this State are to be congratulated upon their ready acquiescence in following the rulings and suggestions of the department relative to the enforcement of the law. Careful and critical examinations are made of the transactions of these licensees, at least twice a year, and the result of these examinations is reported to the offices examined and suggestions and directions made for the correction of any irregularities found to have existed. Invariably the licensees have corrected their records in accordance with the suggestions of the department without further action, all of which speaks well, not only for the administration, but for the licensees thereunder. All of which is commendable.

An attempt was made at the last session of the legislature to permit corporations to become licensees under this act, they having theretofore been barred by reason of the opinion of the Attorney General. The attempt failed and the bill did not pass the House. Therefore, this situation is in the same status it was before. An attempt was also made to amend this law by reducing the rate of interest from $3\frac{1}{2}$ per cent per month to 2 per cent per month. The bill was presented by well meaning people, but statements from the department to the effect that data was not ready or available, nor had Illinois sufficient experience to justify it in stating that the rate as fixed by this law, $3\frac{1}{2}$ per cent per month, was not reasonable, were made to the committee having the matter under consideration, and the bill failed of passage. If the condition that now prevails in this State with reference to this law continues, and there seems to be no reason why it should not, the people of this State can justly claim that by virtue thereof Illinois has freed itself from the clutches of the old time "loan shark," and is now by law regulating small loans to necessitous people and in this is rendering a very great service to a class of our people otherwise neglected.

DIVISION OF SMALL LOANS.

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SMALL LOAN DIVISION—JULY 1, 1920, TO JUNE 30, 1921.

Licenses issued in Cook County.....	60
Licenses issued down State.....	81
Total	<u>141</u>
Licenses cancelled in Cook County.....	3
Licenses cancelled down State.....	1
Total	<u>4</u>
Removal consents given in Cook County.....	7
Removal consents given down State.....	3
Total	<u>10</u>
Examinations made in Cook County.....	66
Examinations made down State.....	107
Total	<u>173</u>

Report of
THE DEPARTMENT OF REGISTRATION
AND EDUCATION

From July 1, 1920 to June 30, 1921

STATE OF ILLINOIS.
THE DEPARTMENT OF REGISTRATION AND EDUCATION.

W. H. H. MILLER, *Director.*

THE NORMAL SCHOOLS.

Illinois State Normal University, Normal; DAVID FELMLEY, L.H.D., LL.D., *President.*

Southern Illinois State Normal University, Carbondale; HENRY W. SHRYOCK, A.B., *President.*

Northern Illinois State Normal School, DeKalb; J. STANLEY BROWN, LL.D., *President.*

Eastern Illinois State Normal School, Charleston; L. C. LORD, LL.D., *President.*

Western Illinois State Normal School, Macomb; WALTER P. MORGAN, PH.M., *President.*

THE NORMAL SCHOOL BOARD.

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FRANCIS G. BLAIR, *ex officio*; Springfield, *Secretary.*

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CHARLES L. CAPEN, Bloomington, (1925).

JOHN C. ALLEN, Monmouth, (1925).

FRANK B. STITT, El Paso, (1923).

LEROY A. GODDARD, Chicago, (1923).

WILLIAM B. OWEN, Chicago, (1923).

FRANK E. RICHIEY, LaSalle, (1921).

HENRY A. NEAL, Charleston, (1921).

ELMER T. WALKER, Macomb, (1921).

THE SCIENTIFIC SURVEYS.

Natural History Survey, S. A. FORBES, PH.D., LL.D., *Chief*, Urbana.

Water Survey, A. M. BUSWELL, PH.D., *Chief*, Urbana.

Geological Survey, F. W. DEWOLF, S.B., *Chief*, Urbana.

THE BOARD OF NATURAL RESOURCES AND CONSERVATION.

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PROF. JOHN M. COULTER, PH.D., University of Chicago.

PROF. WILLIAM A. NOYES, PH.D., LL.D., University of Illinois.

MR. JOHN W. ALVORD, C.E., Chicago.

THE STATE MUSEUM.

State Museum, A. R. CROOK, PH.D., *Chief*, Springfield.

THE BOARD OF STATE MUSEUM ADVISORS.

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CHARLES L. OWEN, A.B., Field Museum, Chicago.

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EDWARD W. PAYNE, Springfield.

CHARLES L. HUTCHINSON, A.M., Chicago.

THE IMMIGRANTS COMMISSION.

GRACE ABBOTT, *Executive Secretary*, Chicago.

COMMISSIONERS.

W. H. H. MILLER, Springfield, *Chairman*.

MRS. HARLAN WARD COOLEY, Chicago.

ABEL DAVIS, Chicago.

JOHN W. FORNOF, Streator.

CHARLES F. HARDING, Chicago.

DIVISION OF REGISTRATION.

FRED C. DODDS, *Superintendent of Registration*.

EXAMINING COMMITTEES.

FOR ARCHITECTS.

HENRY HELMLE, Springfield; HERBERT HEWITT, Peoria; EMORY S. HALL, Chicago; FRANK A. CARPENTER, Rockford; and JAMES M. WHITE, Urbana.

FOR BARBERS.

Carbondale District—J. L. CROWELL, Carbondale; W. B. GLASS, Murphysboro; and G. A. NEAL, DuQuoin.

Centralia District—PERCY GASTON, Centralia; ROBERT E. HALE, Centralia; and E. J. JONES, Salem.

Chicago District—HERMAN GODA, Chicago; JOHN H. FICK, Chicago; and JAMES R. HEFFNER, Chicago.

East St. Louis District—WILLIAM CRITTENDEN, East St. Louis; JOHN E. STRAIT, East St. Louis; and JULIUS SCHALTER, O'Fallon.

Harrisburg District—J. W. DAVIS, Harrisburg; ROBERT R. BLAGG, Harrisburg; and E. R. MARTIN, Eldorado.

Ottawa District—GEORGE TURNER, Streator; VINCENT KEYS, LaSalle; and GEORGE J. ZIMMERMAN, Ottawa.

Peoria District—CHARLES S. ENGLER, Peoria; RALPH DUNHAM, Peoria; and WILLIAM WOLFF, Peoria.

Quincy District—GEORGE E. HARLAND, Quincy; OTTO HOFFMAN, Quincy; and ALBERT C. KOCH, Quincy.

Rockford District—L. N. BILLETT, Rockford; F. J. HIDDLESON, Rockford; and GEORGE T. BARRY, Rockford.

Moline District—AUGUST E. LAMP, Rock Island; JOHN T. BURK, Rock Island; and CLYDE H. WHITE, Moline.

Springfield District—H. L. LESLEY, Decatur; J. S. CONSTANT, Springfield; and PHIL LUTZ, Springfield.

Urbana District—BEN LONG, Champaign; A. H. BALES, Urbana; and MELVIN B. ROGERS, Champaign.

FOR CHIROPODISTS.

DR. JOHN KENISON, Chicago; DR. JOHN C. GREEN, Chicago; and DR. JOSEPH BANK, Springfield.

FOR DENTISTS.

DR. C. L. SNYDER, Freeport; DR. T. A. BROADBENT, Chicago; DR. H. J. THARP, Chicago; DR. E. F. HAZELL, Springfield; and DR. F. B. OLWIN, Robinson.

FOR EMBALMERS.

FRANK H. KETCHAM, Chicago; J. K. PLATNER, Chicago; and H. L. KILPATRICK, Elmwood.

FOR HORSESHOERS.

JOHN W. HUENING, Chicago; CHARLES HATFIELD, East St. Louis; and CARL VOLKENANT, Ottawa.

FOR MEDICAL PRACTITIONERS.

DR. L. C. TAYLOR, Springfield; DR. JOHN A. ROBISON, Chicago; DR. G. M. CUSHING, Chicago; DR. WILLIAM L. NOBLE, Chicago; and DR. CARL E. BLACK, Jacksonville.

FOR NURSES.

MISS MABEL A. MCCLENAHAN, Princeton; MISS ELFRIEDA ERLANDSON, Chicago; MISS ELIZABETH ASSELTINE, Waukegan; MISS ADA BELLE MCCLEERY, Evanston; and MISS ANNA WILLENBORG, Chicago.

FOR OPTOMETRISTS.

HARRY C. PAUL, Chicago; H. W. C. MEISSENER, Chicago; CHARLES O. DEMOURE, Peoria; GEORGE E. WEATHERLY, Decatur; and THOMAS D. GREGG, Harrisburg.

FOR PHARMACISTS.

H. C. CHRISTENSEN, Chicago; W. S. DENTON, Beardstown; F. W. METZGER, Springfield; FRANK W. KRAEMER, Chicago; and ROBERT W. STERLING, Dixon.

FOR STRUCTURAL ENGINEERS.

FREDERICK H. NEWELL, Urbana; ANDREWS ALLEN, Chicago; T. L. CONDRON, Chicago; F. C. H. ARENTZ, Joliet; and ISAAC F. STERN, Chicago.

FOR VETERINARIANS.

DR. W. J. MARTIN, Kankakee; DR. W. H. MYERS, Wenona; and DR. C. O. KROENER, Chicago.

REPORT OF DIRECTOR.

W. H. H. MILLER, *Director.*

Appended will be found reports of the various divisions of this department, giving in detail the activities during the fiscal period ending June 30, 1921. These divisions include the Normal School Board, controlling the five normal schools; the scientific surveys, located at Urbana; the State Museum at Springfield, and the Division of Registration, which administers the various laws regulating the following trades, professions, and occupations: Architecture, barbering, chiropody, dentistry, embalming, horseshoeing, medicine, nursing, optometry, pharmacy, plumbing, structural engineering, veterinarians and real estate agents. The Commission on Immigration also is attached to this department.

The report of the Normal School Board comprises reports from the presidents of the five normal schools. In general, these reports show that these schools are returning to normal conditions following the great decrease in attendance during the war period.

The Fifty-second General Assembly changed the names of the Western Illinois State Normal, the Northern Illinois State Normal, and the Eastern Illinois State Normal Schools to Western Illinois State Teachers' College, Northern Illinois State Teachers' College and Eastern Illinois State Teachers' College, respectively. This was done because these schools have attained the collegiate standard and it was thought their names should be in keeping with the functions they perform.

It will be noted by the reports that an interesting development is the large increase in the percentage of men training for the teaching profession. This is due to the growing demand for men in high school and ward school positions.

The Scientific Surveys have made marked progress during the fiscal period. In addition to its very important study of plant and animal life in the waters of the State, and of injurious insects, the Natural History Survey completed plans for a thorough investigation of forestry conditions in Illinois, looking towards the reforestation of land suitable for that purpose and the conservation of existing forests.

The State Geological Survey has devoted a great deal of its energies toward a thorough study of the State's coal resources and their better utilization. Through its field investigations and surveys, it is prepared to act as a valuable information bureau with respect to geological and mineral resources of the State.

The State Water Survey, in addition to analyzing more than 2,000 samples of water submitted to it from various parts of the State, has been of great assistance to the cities of the State in suggesting water and sewerage systems.

The State Museum is soon to be removed to the commodious quarters prepared for it in the new Centennial Building. A new elk group will be ready to add to the valuable collection as soon as the new quarters are occupied.

The Immigrants Commission, empowered to make a survey of alien born and foreign speaking people of the State and examine into their conditions, was very active during the fiscal year, but, due to the fact that the appropriation for the biennium beginning July 1, 1921 was vetoed, the commission went out of existence on the last day of this fiscal period.

The report of the Division of Registration shows that a total of \$106,100.70 was collected during the fiscal year in fees.

THE NORMAL SCHOOLS.

The fourth year of operation under the consolidated Normal School Board provided for in the Administrative Code was marked by the same degree of efficiency and cooperation as was manifested by this body in the past years. A number of meetings were held at the various schools and in the department during the time covered in this report.

The reports of the presidents are herewith presented:

THE ILLINOIS STATE NORMAL UNIVERSITY.

DAVID FELMLEY, *President.*

The school year 1920-21 can scarcely be called a prosperous year at the State Normal University. The recovery from the war, so promising in 1919-20, was arrested; for in the 36 weeks of the regular school year the attendance made no gain. The campaign for students put on in the high schools in the spring of 1920 did not yield the expected increase, although there is now abundance of evidence that favorable results will appear later.

In the summer of 1920 several of the faculty resigned to accept more lucrative employment elsewhere. It was simply impossible to fill their places with the type of men and women who only should be employed as teachers of teachers. The teachers who remained at their posts in many cases made considerable pecuniary sacrifice. Three young women who graduated from this institution in 1920 received during the past year a higher monthly salary than thirty-seven of the forty-two women employed as their teachers. Fortunately the General Assembly granted as a bonus 30 per cent increase in the salaries for the last half-year and have continued this increase through the next biennium. This increase has made it possible to retain most of the valued teachers and to strengthen the faculty at some points. Yet the increase was not all that should have been granted. The normal schools should be able to command the best talent and skill in the profession; yet their salary schedule is lower than obtains in the best city systems of the State.

The quality of preparation of the students is steadily rising. Nearly 90 per cent of them are high school graduates. The disappearance of students on the high school level is one cause of the small attendance. The classes provided for students of this type who were preparing to teach in country schools are greatly reduced. New courses dealing with the problems of the rural school do not attract many high school gradu-

ates; for country school teaching, because of low salaries and poor living conditions, does not look inviting. Consolidated schools with homes for the teachers are solving this problem in other states and must come in Illinois.

For many years this institution has limited its attendance to students who are preparing to teach. Not a dozen students can be found without this intention. It is proposed that we admit junior college students, as in Wisconsin, and so relieve in part the congestion at the State University. These students would fall into many of the regular classes. Some new classes would be provided. Few additional teachers would be needed. Money would be saved to the State. The presence of a large body of young men would increase the interest in athletics, debating, and journalism, and in the natural and political sciences. The danger is that the distinct professional atmosphere of the normal school will disappear. But this will not happen if these students do not exceed one-fourth of the student body. On the contrary many of them will become interested in teaching and enter the service of the State.

There is a strong demand for correspondence courses that will enable isolated teachers in charge of small rural schools to use their spare time in directed study. During the past year nearly one hundred teachers carried such courses in geography. The plan is to employ a full-time teacher of this work for 1921-22. While this service is not so helpful to active teachers as extension courses, it reaches many who are remote from the study centers.

The summer attendance at Normal has almost reached the pre-war maximum and puts a severe strain upon the resources of the institution. Fifty additional teachers were employed, the public school building rented to secure needed class rooms, and almost every available room in Normal and Bloomington engaged to house the students. Last summer 167 different courses were offered, with from two to five large classes in several of them. The senior college courses are taught in three-year cycles, so that a student may complete a year's work by attending three successive summers. Many former graduates are pushing on for a life certificate, or for a degree.

The Normal University undertakes to train every sort of teacher needed in the public school system, and to that end provides special curriculums for training teachers of art, music, manual training, home economics, agriculture, commercial branches, physical education, and the kindergarten. Before the war these special departments were growing and prosperous. Since the war the attendance has been seriously reduced in all but the kindergarten and the commercial departments.

The demand for teachers trained in the normal schools far outruns our ability to supply them. Many school systems demand normal graduates, and the effect of this demand is seen in the steady growth in the percentage of matriculated students who complete the course, yet

the demand grows more rapidly than the supply. So long as elementary teachers are drawn chiefly from families of modest resources it will be difficult to secure two years of professional preparation unless State aid is offered for those who propose to enter this form of public service. In an era of peace, education is the most important form of national defense; the training of teachers at public expense is as wise a public policy as the training of cadets at Annapolis and West Point.

The Normal University is in urgent need of additional buildings for its regular courses, not to speak of its summer school needs.

The need of a gymnasium is the most insistent. It cannot prepare teachers to meet the statutory requirements of physical training in the public schools without a well equipped building.

It needs a practice house for its students of home economics. This is demanded by the Federal Vocational Board, which now pays the institution over \$5,000 per year for educating teachers of home economics.

It needs enlarged dormitory space for young women.

In Normal, as in other growing towns, housing accommodations are in demand, and fewer rooms in private homes are available for students. Rents, hitherto quite low, are steadily rising. Moreover, a residence hall provides a fine social life and affords control of the students' study habits, dietary, and mode of life, not possible where they room in rooms rented primarily for profit. It is just as important that the student have proper living conditions as that she have laboratories and instructors. The south wing included in the plan of Fell Hall should be built at once. This will afford space for 51 students without requiring additional parlors, offices, dining room, or kitchen.

The Normal University needs a science hall that will accommodate its departments of biology, physics and chemistry, now scattered through three buildings. Our present space is quite insufficient and is needed for other classes.

Our attendance for the twelve months ending June 10, 1921, is as follows:

Senior college graduates (with degrees).....	20	
Junior college graduates (for high school teaching).....	36	
Normal school graduates.....	101	157
Other students in teachers college (regular terms).....	93	
Other students in normal school (regular terms).....	249	
Special students in mid-spring term (1921).....	252	594
Enrollment first summer term (1920).....	1,989	
Enrollment second summer term (1920).....	528	2,517
Total		3,268
Deduct names counted twice.....		373
Different resident students.....	2,895	
Correspondence and extension students.....	122	
High school students.....	230	
Elementary school pupils.....	548	
Pupils in S. O. Home.....	350	
Total students and pupils under instruction.....		4,145

SOUTHERN ILLINOIS STATE NORMAL UNIVERSITY.

H. W. SHRYOCK, *President*.

The following table exhibits the essential registration facts for the past six years:

	Summer session.	Fall term.	Winter term.	Spring and mid-spring terms.	Normal graduates.
1916.....	952	973	873	1,153	55—H. S. 31
1917.....	554	722	728	1,153	104—H. S. 27
1918.....	414	607	709	788	90—H. S. 32
1919.....	662	746	612	804	64—H. S. 30
1920.....	625	696	722	878	116—H. S. 45
1921 { 1st session.....	844	755	706	1,056	129—H. S. 60
{ 2d session.....	228				

In this table may be read the ebb of attendance due to the effects of the great war. It exhibits, too, the almost complete recovery of the school. For the year under report, the school graduated 129 students from the junior college course, and 60 from the high school. The class was not only the largest in the history of the school, but 49 of the 129 were young men. It is doubtful if any other normal school in the country ever graduated so large a percentage of men in any class.

As has usually been the case, some of the young people decided not to teach. A number entered the University of Illinois; others are enrolled in our senior college course. The great majority, however, are teaching. The average salary for the young men is somewhat above \$1,800; for the young women, approximately \$1,200.

For the first thirty-eight years of its existence, the school graduated, high school and junior college combined, only 675 students. The records are inaccurate, but it is estimated that 25 per cent of all the graduates were merely from the high school. Last year's junior college class of 129 is alone equal to about one-fifth of both junior college and high school for the first thirty-eight years of the history of the school.

WESTERN ILLINOIS STATE TEACHERS' COLLEGE.

W. P. MORGAN, *President*.

Former reports have been made for this institution under the name of the Western Illinois State Normal School but the school has recently extended some of its curriculums so that four years are required for their completion. Bachelor degrees are granted to persons who complete them. On account of this enlarged scope of the school the Fifty-second General Assembly passed a bill, which the Governor signed June 3, 1921, giving the school the name, Western Illinois State Teachers' College.

The college is in better condition than it was one year ago, due to the renewed interest in teaching and the additional appropriations for its support. Many are returning to the college for additional training. This has increased the attendance in the college department considerably. Much of the additional financial support which the college has received recently has been for the increase in salaries for faculty members and employees. Because of increased attendance several new members should be added to the faculty. This has been impossible because the item covering salaries for additional members of the faculty was stricken from the appropriation bill and the item providing for a revolving fund of \$12,000 to \$15,000 was vetoed by the Governor because it had been declared unconstitutional in an opinion by the Attorney General. Efforts must be made to compensate this loss in the budget for the next biennium.

It has been difficult to operate the school during the winter months because the heating plant is inadequate and almost worn out. A new plant is needed to care for the present buildings and proposed additions. A new gymnasium should be erected in connection with the new heating plant. Other improvements are quite essential. If the college is to advance rapidly in its new field, additional appropriations must be made to improve the laboratories and library. The laboratories need much additional apparatus and the library must have several books added for the senior college classes. Additional room is needed so that the elementary school, the high school, and the college may be organized more nearly as distinct units for administration. The attention of the college has been called to these needs very recently by a committee of ten from the University of Illinois who inspected the work of the College Department with the purpose of rating the college curricula.

During the year ending June 30, 1921, there was a total enrollment of 2,091. Of this number 90 boys and 106 girls were pupils in the elementary school. There were 218 men and 1,085 women in residence. There were 595 men and women who did extension work. Students enrolled from 46 counties in Illinois, five other states, and the Philippine Islands.

During the year 63 persons finished some one of the junior college curricula and received diplomas. Thirteen students received diplomas in special subjects and five students finished one of the four-year college curricula and received bachelor's degrees.

The college has been conducting a six weeks' summer term each year but last summer two six weeks' summer terms were held. The attendance at the first was 822, while 93 were present for the second summer term.

Attendance during the last five years was as follows:

	1916-7	1917-8	1918-9	1919-20	1920-21
Students in residence.....	1,327	1,191	1,075	1,174	1,303
Extension.....	866	652	392	552	592
Training school.....	181	192	184	190	196
Total.....	2,374	2,035	1,651	1,916	2,091
Counted twice.....	240	122	122	182	184
Individuals enrolled.....	2,134	1,913	1,529	1,734	1,907

NORTHERN ILLINOIS STATE TEACHERS' COLLEGE.

J. STANLEY BROWN, *President*.

The attendance in the Northern Illinois State Teachers' College for the past year has brought the institution back almost to a pre-war level. There were enrolled in the summer quarter's work 830 people, which represented an increase of 36 per cent over last year. The regular school year, September to June, shows an enrollment of 423, representing an increase of about 26 per cent for the regular year.

The scarcity of teachers is not so great as when the last report was made but the graduating class, numbering 127, were all located before they received their diplomas. The salaries which they received were about the same as the preceding year. There is a slight tendency to decrease in the salaries of rural schools, but the villages and cities are maintaining their immediate post-war level. The men who graduated received \$200 a month as a minimum. Those graduating from the four-year course and received a degree received \$250 a month. The women graduating from the two-year course received \$1,000 for the school year as a minimum and \$1,600 as a maximum.

We have a larger number of men than ever before, since the calls for young men for village principalships and departmental work in high schools involving the teaching of manual training, printing, games and athletics, are persistent and continuous, and make it easy to locate these graduates in good positions. The State is recognizing the fact, through its appropriations, that the training of teachers for games and athletics is as essential now as in other fields of education.

We have now three different groups of students—a small high school group numbering fewer than 40, a large junior college or normal school group numbering about 400, and a small college group of fewer than 15. The fact that we now have a four-year course in drawing, music, home economics, leading to the degree of Bachelor of Education, and that we have a four-year general course leading to the degree, Bachelor of Education, has given a great stimulation to young men and young women graduating from good four-year high schools.

The encouragement given the faculty by the last General Assembly has had much to do with creating a fine sort of morale and stimulating them to do their best.

EASTERN ILLINOIS STATE TEACHERS' COLLEGE.

LIVINGSTON C. LORD, *President*.

An encouraging gain has been made in attendance, partly because teachers' salaries have been increased while other gainful occupations are paying less than two or three years ago, and, in my judgment, partly because of the widespread and rather intense interest in education. It seems altogether probable that in the near future, due to this unprecedented interest in education, the enrollment in teacher training institutions will increase and that these institutions will receive greater recognition than they have in the past.

The buildings, equipment, and faculties in completeness and quality ought not to be excelled by any other educational institution. At present many high schools are better off in buildings—perhaps especially so in gymnasiums—and in laboratories and apparatus than any teacher training institution that I know of. It not infrequently happens that students coming from the best equipped high schools look with scorn upon some of the very modest plants of the professional schools.

However, the one thing that must never be lost sight of is the character of the faculty—the personality, scholarly attainment, teaching skill, of every member. Teachers of teachers ought to be the very best teachers in the world—and the best of things cost.

STATEMENT OF ATTENDANCE—TWELVE MONTHS ENDING JUNE 30, 1921.

Teachers college—		
Summer term, 1920.....	885	
Regular year—September 13, 1920, to June 3, 1921.....	227	
Senior high school (twelfth, eleventh and tenth years).....	149	
Junior high school—		
Ninth grade	116	
Total in the high school.....	265	
Total above the eighth grade.....	492	
Seventh and eighth grades.....	77	
Elementary school (first six grades).....	210	
Total in the first eight grades.....	287	
Total	1,664	
Counted twice	84	
Grand total	1,580	
Counties represented	44	
Other states represented.....	6	
Teachers in faculty.....	40	
SUMMER SCHOOL, 1921.		
First six weeks' term.....	964	
Second six weeks' term.....	152	

NATURAL HISTORY SURVEY.

STEPHEN A. FORBES, *Chief.*

The principal operations of the Natural History Survey Division during the year ending June 30, 1921, have been in the direction of continued field and vivarium studies, practical operations, and extension work on the injurious insects of the State, and the increase and improvement of the insect collections of the survey by field work and exchange; studies of the plant and animal life of the waters of the State, especially those of the Illinois River, as affected by pollution from city sewage and manufacturing wastes; such educational and publicity work on the forestry of the State as could be done by a single forester with no funds available except for his traveling expenses; and the preparation and publication of bulletins and circulars on the biology and entomology of Illinois.

The field entomologists have done important experimental work on methods of protecting or diminishing injury to crops by the apple flea-weevil, peach-tree borer, potato leaf-hopper, Hessian fly, clover-seed insects, chinch-bug, and corn ear-worm. The numbers of the apple flea-weevil were diminished 85 per cent by the use of a large gasoline torch to burn away in winter the fallen leaves and other vegetation under trees infested the previous summer. Peach trees were completely freed of the borer by the use of a new insecticide, between September 15 and October 15, and many fruit growers are planning to use this insecticide next fall. As a result of field experiments (continued from the preceding year) in fixing a date for wheat sowing in each part of the State which will make the crop safe against the fall invasion of the Hessian fly, from 80 to 90 per cent of all wheat raised in Illinois was sown on or after the dates recommended by the entomologists of the survey.

The continuance of a serious chinch-bug outbreak in several southern and western counties has called for an active campaign for the protection of the corn crop against injury at the time of wheat harvest, and several hundred miles of barrier impassible by chinch-bugs were laid down by farmers in those counties. Additional field tests have been made of several varieties of corn as to their resistance to chinch-bug attack, and three of these, which have yielded in some cases four or five times as much as other standard varieties under like degrees of infestation, have been widely planted in the chinch-bug region as a consequence. An especially important experiment for the protection of corn against the ear-worm has been undertaken, in cooperation with several of the

larger corn farmers of the State, by the use of a large power duster developed by us along the lines suggested by the cotton duster now used in the south. This machine has been made and tested successfully with a view to its practical use later in the season. Considerable work has also been done on the life history, habits, and suppression of truck-farm and greenhouse pests in northern Illinois; and the mosquito survey of southern Illinois has been continued by a study of the malarial species and means of their suppression in a typical mining town.

By way of extension and demonstration work, 79 special trips with county agents and farmers have been made, 63 meetings of farmers have been addressed in different parts of the State, and 15 conferences with entomologists and agricultural workers have been attended. Data has been furnished, from time to time, to the general and agricultural press, and 19 circular letters of information and advice concerning special insect outbreaks have been widely distributed. One hundred and seventy thousand copies of our entomological publications have been sent out, about 3,500 letters of specific information have been written in reply to inquiries concerning insect pests, and seasonal warnings concerning the best time of spraying for the protection of apples against injury by the codling-moth have been given to about 2,500 orchardists of the State.

The work of the systematic entomologists, one of whom is also custodian of all the survey property, has consisted mainly in the transfer of the insects in 109 cases from the old to new steel cabinets, and the incorporation of new material; in the distribution of seven survey bulletins, and several circulars published during the year; in the making of several exchanges of specimens with other entomologists for the increase of the number of species represented in our collections; in the determination of specimens sent in by the Illinois field entomologists and by entomologists of other states and the United States National Museum; in the preparation of an exhibit in entomology for the Pageant of Progress; and in the preparation of papers on entomology for publication in the Survey Bulletin and various journals, and proceedings of entomological societies.

The forester of the Natural History Survey, in the absence of assistance or operating funds, has been especially active in publicity and educational work, preparing many articles for the press throughout the State, and writing a paper on fire prevention in Illinois forests published by the survey as its Forestry Circular No. 2. He has also made many addresses to farmers' institutes and other farmers' organizations, to normal schools, public high schools, and teachers' associations, to women's clubs, boy scouts, chambers of commerce, etc., and to classes of botany and agricultural extension at the University of Illinois. He has written several hundreds of letters in reply to requests for information and advice on forestry topics, and, with the cooperation of the Botanical Department of the University of Chicago, has made a preliminary survey

of a typical forest tract in Union County. He has cooperated also with the United States Forest Service in securing information, by field trips and otherwise, on fire hazards and fire protection, and the prevailing methods of forest management in Illinois, and has made several inspections of forest tracts and reports upon them for the Agricultural Experiment Station, coal and railway companies, and several other owners of forest properties, all on condition that his expenses should be paid by those immediately interested. He also spent considerable time in the preparation of a notable forestry exhibit for the Pageant of Progress in Chicago.

As a result of appropriations made by the Fifty-second General Assembly for the establishment of a systematic survey of Illinois forests and deforested lands, a party of forestry graduates has been engaged to begin field operations in July, 1921.

In the biological laboratory, continued studies have been made upon the effects of variations of temperature, moisture, and rainfall on the life histories and activities of codling-moths and chinch-bugs, and on the effect of varying degrees of acidity of the river water upon the power of fishes to survive where the oxygen supply is deficient.

An important study was made in the summer and fall of 1920 upon chemical and biological conditions in Peoria Lake and the Illinois River from Chillicothe to Beardstown, ninety miles below. The field operation was carried on conjointly with the State Water Survey, and with assistance, in obtaining current measurements, from the University Department of Civil Engineering. In the course of this work 408 determinations of dissolved oxygen were made, together with 130 plankton collections, 108 quantitative collections of the smaller animals of the bottom muds of river and lake, and 223 current measurements, about two-thirds of the last mentioned in Peoria Lake and the remainder in the river in the neighborhood of Havana.

By comparison of the season's work with similar studies made from 1911 onward, it was found that the minute plant and animal life of the river just above Peoria Lake has changed, in this interval, from clean-water species to those characteristic of pollutional or semi-pollutional conditions. In Peoria Lake itself, however, the condition of the water was greatly improved, the exhausted oxygen supply being restored by the action of an abundance of minute green organisms, but below the lake the oxygen ratios fell off rapidly and recovered very slowly. This condition of the river was in decided contrast with that of the adjacent bottomland lakes, in whose waters oxygen was much more abundant and the process of self-purification was more advanced. The animal life of the bottom in Peoria Lake was made up almost wholly of pollutional forms, which had replaced the native clean-water animals, and the same was true of the river for a long distance below.

The publications of the survey during the year covered by this report were seven bulletins and three circulars, amounting to 266 pages of text and 33 plates. There have also been issued during the year a reprint of the volume and atlas containing our final report on the fishes of Illinois, and of the Eighteenth and Twenty-third Reports of the Illinois State Entomologist, which together constitute a monograph on the American insects injurious to Indian corn.

In its several lines of work, the Natural History Survey has profited by cooperative relations with the Water Survey of our own department, with the United States Department of Agriculture, the United States Forest Service, the Agricultural Experiment Station of the University of Illinois, the State Agricultural Extension Service, the farm bureaus of the various counties, the Fish and Game Division of the State Department of Agriculture, the Division of Waterways of the Department of Public Works and Buildings, and the State Department of Public Health, all of which have responded cordially and promptly to every request which has been made upon them for cooperation or assistance.

STATE GEOLOGICAL SURVEY.

F. W. DEWOLF, *Chief.*

The work of the Geological Survey has been chiefly a study of the mineral resources of the State, and their efficient exploration and development. Supplementary to this, there have been certain other investigations and surveys which involve the reclamation of swamps and flooded lowlands, the topographic mapping of the State, and the search for materials for highway construction. Considerable work of a cooperative character has been done for other divisions and departments of the State Government, a phase of our activities which is specifically called for by the Administrative Code.

The selection of areas to be mapped topographically in cooperation with the United States Geological Survey was determined with special reference to the plans of the Highway Division for construction of hard roads, in order that the topographic maps might make unnecessary the usual preliminary surveys. Similarly, the search for new locations where quarries and gravel pits may be opened was continued and completed in cooperation with the State Highway Division. A preliminary report on this subject was transmitted to the highway officials and at an early date will be published. This work engaged the attention of approximately ten field men during two whole field seasons and included a complete investigation in all counties of the State in which good materials might be expected. It should lead to the opening up of many new deposits, and a considerable reduction in the price of road materials.

As during the previous year, the Secretary of State, through the Securities Department, has received some technical assistance from the survey in the review of mining and oil applications which came before the department under the Securities or "Blue Sky" Law.

The topographic survey of the State, referred to above, was completed for some 820 square miles in Bureau, Cook, McHenry, Jackson, Kane, Lake, Warren, Will, Williamson and Union counties. In addition to this, nearly 2,000 miles of traverse lines were run for these and other areas under survey.

The drainage of swamp and overflow lands has been a long standing problem of great importance in Illinois. This year witnessed the completion of an engineering survey of field conditions throughout the entire State, and the publication of a preliminary report of the results. An excellent map on a scale of 1 inch to 8 miles accompanies the report and shows some 1,150,000 acres of overflowed lands along the river and creek

bottoms. Part of this land is in timber, and on the other portions crops are lost more than one-half the time. In some places harvesting is successful only once in four years. These bottom lands are one of our most important natural resources, and it is estimated that their reclamation would add some \$75,000,000 annually to the wealth of the State. Many upland areas have been drained at the expense of valuable farm lands along the lower stretches of our rivers where the flood conditions have become almost intolerable. Along with the engineering problems, the report reviews the status of our drainage laws, and calls attention to certain features which make difficult further progress in organizing and operating separate districts. The need of careful coordination in this work is emphasized. As a result of the Survey report, recommendations for a revision of the drainage laws was made to the General Assembly.

An important part of the work of the survey is the study of the State's coal resources and their better utilization. An extensive sampling campaign to determine the quality of coal in the mines was begun near the close of the year, and in addition a report on the coal resources of the Springfield-Peoria region, in cooperation with the University of Illinois and the United States Bureau of Mines, was finished and submitted for printing. Work was continued and a bulletin published on the problem of purification of city gas in plants where Illinois coal is used as a basis of manufacture. Four geological maps of an area of 400 square miles, including portions of minor coal fields in western Illinois, were engraved, and will be included in bulletins which are in preparation.

The search for new oil fields was continued, and one new field near Waterloo in Monroe County was discovered in the middle of the year as a result of recommendations published in survey press bulletins. Other press bulletins containing suggestions for operations in southeastern Illinois and in various counties of western Illinois were published from time to time. A rather detailed report on oil possibilities in an area in eastern Adams County was submitted for publication. The survey continued to advise with operators in search of oil structures by means of the diamond drill, and promising results were obtained.

An important bulletin and map on the geology and mineral resources of Hardin County was issued. Because this is the most important fluorspar district in the country, the report is of unusual interest, and will be increasingly valuable in the search for new ore deposits.

Miscellaneous surveys were undertaken over an area of 1,000 square miles extending from the Wisconsin line in northeastern Illinois to the vicinity of Joliet, and other broad regional studies were continued across most of the counties lying north of the Illinois River and extending for some distance west of Rockford. Geological reports were prepared for areas near Dixon, Rockford and Morris, which had been surveyed the previous year, and these reports will be printed at an early date. An-

other investigation covering fireclays of southern Illinois was completed and advanced toward publication. Besides these reports on specific areas or subjects, a notable new map of the State showing the location of all the developed mineral industries was published in four colors on a scale of approximately 8 miles to the inch, and an accompanying directory gives the names and addresses of all operators for whom locations are shown on the map.

The Geological Survey Division is an information bureau with regard to the geology and mineral resources of Illinois. Its information is collected by field investigations and surveys of preliminary or of final character, and this information is disseminated by means of published reports and maps, but also in large volume in reply to letters of inquiry. Practically all of the work of the division has immediate economic value, and even the purely scientific work which is carried on sooner or later has an important bearing on some practical problem of importance to the State.

STATE WATER SURVEY.

A. M. BUSWELL, *Chief.*

On July 1, 1920, Dr. Edward Bartow, who had been Chief of the State Water Survey Division for fifteen years, resigned and at his request his resignation took effect September 1 of that year. On September 1, Dr. A. M. Buswell, formerly of Columbia University, assumed the duties of Chief of the Survey Division, having been duly selected by the Board of Natural Resources and Conservation Advisors.

During the past year the State Water Survey has continued to maintain a water analysis service for citizens of the State, as directed by law. Since July 1, 1920, a total of 2,166 analyses have been made. These included 42 mineral analyses, 24 boiler analyses, 48 special examinations for particular conditions, 694 bacterial examinations, and 1,352 sanitary chemical and bacteriological examinations. The University swimming pools have been examined at regular intervals at the request of the University health authorities.

Bulletin No. 16, the manuscript for which was submitted in May, 1920, was published, and is ready for distribution. A general index to volumes 1 to 16 has been prepared and will be published in the early part of the next biennium.

At the request of other departments several special investigations have been made. These include investigations of the effect of wastes on six important streams, the incrustation of water mains at Mt. Vernon, and, in cooperation with the United States and State Geological Surveys, the corrosion of oil well casings.

Some changes have been made in the organization and administration of the Survey's affairs. A reorganization of the system of recording and reporting analyses has resulted in a 25 per cent decrease in the required stenographic force. The new system makes original data more readily available and eliminates errors resulting from repeated copying of results from one book to another by hand.

It became apparent that there was need for a definite understanding between the University authorities and the Water Survey as to how much time the part-time chemists were spending in work for the State and how much they were spending in post-graduate work in the University. Accordingly a schedule of hours was drawn up which has proved very valuable in explaining to newly appointed chemists and to the University authorities the exact status of these part-time employees.

In order to prevent dissipation of energy upon too large a variety of

small problems, the research work of the Survey has been organized during the past year into certain definite major projects. A brief description of each of these projects is given below:

First—Investigation of the chemical reactions of purification of water for industrial and drinking purposes. Preliminary survey of this field has yielded the following results:

Hydrogen electrode titration curves have been run with carbonates of sodium magnesium and calcium, using a strong acid. It has been shown that the shape and position of the curve is unaffected by the metal ion but that the inflection points occur at slightly lower hydrogen ion concentrations in dilute solutions than in the more concentrated ones.

Precipitation curves of the precipitation of calcium as carbonate, while not so regular as those of the precipitation of magnesium as the hydroxide, tend to show that the reaction is complete, sufficient carbonate being present at a hydrogen ion concentration corresponding to pH of 9.5.

Aluminium hydroxide was shown to start precipitating in solutions as acid as pH 4 and to be completely precipitated at pH 6.5 to 7.5. At hydrogen ion concentrations much lower than this re-solution commenced to take place, re-solution being complete at hydrogen ion concentrations between pH 10 and 11.

While this investigation is still in a more or less theoretical stage, practical benefits have already been derived from the application of these principles in the operation of certain filtration plants.

Second—An investigation of ground water resources. The number of requests for information and advice concerning ground water resources has led to the adoption of a definite program for collection of information on this very important natural resource. This program includes the collection of information concerning wells as bored, determination of the yield of old and new wells, and the complete chemical analysis of all well waters throughout the State.

Considerable information has been given in regard to drilling and casing of wells in order that municipalities might secure water of suitable quality in sufficient quantity for their needs. The relative merits of surface and ground waters from various strata and the depths from which it is necessary to pump water from various strata have been studied in cooperation with officials in charge of public water supplies. Assistance has been given at hearings before the State Public Utilities Commission. Many inquiries have been answered from information on file. Seventy-seven municipalities have been visited to secure additional information in regard to local conditions, to secure information in regard to new wells under construction, changes in yield and water levels in old wells, and to collect samples of water for analysis.

Third—An investigation of the activated sludge process of sewage disposal. For a number of years investigations of this process have been

carried on in these laboratories. Previous to his resignation, Dr. Bartow had installed a Dorr-Peck activated sludge system of sewage disposal for experimental purposes, and purchased a thirty-leaf Patterson filter press, and had arranged for the purchase of a Bayley drier to be used in sludge drying experiments. The whole installation was intended to treat 100,000 gallons of sewage per day and produce dried fertilizer at the rate of a ton per 1,000,000 gallons of sewage treated.

During the present year attention has been directed toward the investigation of the nitrogen cycle and to the applicability of the Dorr-Peck process. The results obtained indicate that it is possible to purify sewage using about half as much air for aerating the sludge as has been previously employed. Under such conditions the nitrogen cycle is reversed and the nitrifying bacteria act as protein formers rather than as oxidizers.

Fourth—An investigation of sludge drying. Experiments with the colloidal properties of activated sludge have indicated that, by proper methods of adjustment of the intensity rather than the quantity of the acidity, water content in the sludge can be very materially reduced.

These experiments have not as yet led to the development of a large scale operating program for sludge drying. Experiments with the centrifuge have definitely shown that this apparatus removes only the heavier portion of the sludge and that the lighter portions have to be returned to the sewage treatment tanks, where they would accumulate and interfere with the process.

STATE MUSEUM.

A. R. CROOK, *Chief.*

In every community there are people so preoccupied by their own vocations that they give little attention to matters not related to their life work and hence are unacquainted with the educational, religious, or social institutions of their own cities. They rarely visit the city parks, never pass through the doors of the public schools, do not use the libraries, the museums, nor the churches.

Such people often question the value of museums and ask whether the public patronizes them. They are surprised when they learn that thousands of people in all walks of life make many visits to the museum annually. They think that a museum is interesting to children alone or that people who visit it are rather strange or that one visit will last for several years. They have no conception of the character of the materials assembled, the purpose of the institution, or the great service which it performs for the public in all walks of life. They do not know that the State Museum is visited by children, by young people, by middle aged and by old people. During the past year more than sixty thousand people have visited it. Some people come often and make serious study of the collections. Scholars find facts which aid them in their work. Business men gain ideas and knowledge valuable in promoting their various enterprises. Lovers of art find beautiful paintings, delicate colors, and graceful forms which nature has provided out of doors in so bountiful a manner and which skilful workers have brought within the four walls. Students of civics, of botany, zoology, minerealogy, geology, entomology, archaeology, and the manufacturing arts, learn in a short time facts and interpretations which would require much search in literature and which would be presented in a less striking manner.

During the week of the State Fair the museum is crowded with visitors, many of whom come from the remoter portions of the State. More than sixteen thousand sightseers inspected our exhibits August 19-27, 1921, and understood the collections better since five ladies who are familiar with the great museums of the country and who have special knowledge of some branch of science acted as docents again this year. One of these docents is an artist of ability who has also made a special study of mushrooms and explained these to several thousand visitors. Another one of the docents had studied fossils so as to be able to explain the laws of fossilization and the fauna and flora represented in our collections. Another gave especial attention to the collections of minerals

which illustrate all of the minerals found in the State and those used to any extent by the people of Illinois.

The museum fills an important place in the life of the people of this community and of the surrounding counties. During the year excursionists came from Danville, Decatur, Bloomington, Peoria, Taylorville, Chatham, Jacksonville, Quincy, and other places. After the museum is moved to the Centennial Building, the visitors will be much more numerous.

There is a wealth of materials in the museum, though, because of small financial support in the past and the neglect of persons who are more or less concerned in its growth, it is far from containing such collections as would naturally be expected in an institution of its importance. When properly encouraged it will become one of the best of its kind in the United States.

Since the museum is soon to be moved into new quarters and since funds for equipment were exhausted not many additions were made to the collections during the year covered in this report.

Work on the elk group that was begun in the latter part of the preceding year was prosecuted as fast as possible. Mr. Connor of Chicago secured the elk. All of the materials were assembled and the group is ready for installation as soon as the new building is ready. It will be unsurpassed by any similar group in the country.

Many other plans are in operation and their results will be evident in the new quarters.

Another very important project under way is one which was made possible by E. W. Payne, who on June 9, 1921, set aside \$5,000 to cover the initial cost of representing the wild flowers of Illinois in some month such as May. This work will not be begun until early in the year 1922. The plan is to employ the most skilful artists in glass, celluloid, and wax whom it is possible to obtain and instruct them to represent these flowers in proper materials and to set them in a group similar to that in which the mushrooms are displayed. A sample of the kind of work desired is shown by a group of "Black-eyed Susans" made in glass so successfully that the visitor always thinks they are real and many a person inquires where they may be obtained.

At the only meeting of the Board of Advisors during the year, on June 6, but two members were present. The question of the arrangement of exhibits and the style of cases was taken up quite fully.

To obtain further information on styles of cases, methods of installation, etc., two members of the board, together with the Chief, inspected cases and installations in the Heye Foundation of the American Indian, the American Museum in New York City, Harvard University Museum, and the Museum of Fine Arts in Boston.

During the year much work was done in cataloging materials, in repairing collections, in sending communications of various kinds to

different persons in the State, and especially in sending out the "Guide to the Mineral Collections." More than one thousand correspondents took the trouble to write concerning the "Guide to the Mineral Collections" expressing their appreciation of the work and complimenting the State on bringing out a publication of so useful a nature. The Chief of the museum as secretary of the State Academy of Science spent considerable time and effort in editing Volumes XI, XII, and XIII of the Transactions of the Academy. The work was rendered more arduous because of the unavoidable confusion that resulted upon the death of the former secretary and from the necessity of handling three volumes at once.

Below is given a list of the materials given and purchased and also one showing the books purchased and received as gifts.

Altogether the year was not one of the greatest prosperity. However, substantial progress was made and the institution is looking forward to very successful years in the future.

SPECIMENS RECEIVED—JULY 1, 1920—JUNE 30, 1921.

GIFTS.

Minerals.

Catalog No.	Name.	Donor.
4948.	Aragonite	W. A. Lower.
4949.	Aragonite	Do.
4950.	Aragonite—Modern form	Do.
4951.	Boulder—Curious shape	Do.
4952.	Jasper—Desert varnished	Do.

Arthropoda.

3.	Horseshoe Crab, 7 specimens	Mrs. Mary F. Mather.
4.	Hornet's Nest	A. L. Yoe.

Fossil Shells.

13597.	Belemnites	Dr. J. W. Boot.
13598.	Ostrea	Do.
13599.	Strophomena	A. R. Crook.
13600.	Crinoid Calyxes	Do.

Manufacturing Arts.

146.	The Dawn of Art. Bas-relief	George Langford.
147.	The Prehuman Flintsmith of Chelles. Bas-relief	Do.
148.	American Mastodon Elephant. Bas-relief	Do.
149.	Imperial or Southern Mammoth and Sabre-toothed Tiger. Bas-relief	Do.
150.	The Hairy Mammoth and Woolly Rhinoceros. Bas-relief	Do.
151.	Triceratops. Bas-relief	Do.
152.	Theodolite	U. S. Coast and Geodetic Survey.

SPECIMENS PURCHASED.

Birds.

1005.	Southern Hairy Woodpecker—Skin	A. T. Wayne.
	6 Glass models of Black-eyed Susans	H. O. Miller.
	Lepidoptera—51 Riker Mounts	Theo. H. Frison.

Minerals.

4943.	Copper	Ward's Natural Science Establishment.
4944.	Cuprite var. chalcotrichite	Do.
4945.	Cuprite var. chalcotrichite	Do.
4946.	Malachite	Do.

BOOKS RECEIVED—JULY 1, 1920—JUNE 30, 1921.

GIFTS.

Bound Books.

- Illinois State Geological Survey Bulletin No. 32.
 Illinois State Geological Survey Bulletin No. 25.
 Illinois Centennial Commission, "The Industrial State," 1870-1893.
 Illinois Centennial Commission, "History of Illinois," 1673-1818.
 Smithsonian Institution. Annual Report, June, 1918.
 U. S. Bureau of Ethnology, Bulletin 67.
 Geology of the Ozark Highlands of Missouri.
 Illinois Second Administrative Report, July, 1918-June 30, 1919.
 Birds of North Carolina. North Carolina Geological Survey.
 Michigan Academy of Science. Twenty-first Annual Report.
 Wisconsin Geological and Natural History Survey Bull. No. 57. Pt. 1.
 Geological Survey of Ohio. Fourth Series. Bulletin 22.
 U. S. National Museum. Annual Report, June 30, 1920.
 North Dakota Historical Collections. Vol. 6.
 Indiana Department of Conservation. Lake Maxinkuckee. Vol. I.
 Indiana Department of Conservation. Lake Maxinkuckee. Vol. II.
 U. S. Coast and Geodetic Survey. Annual Report, June 30, 1920.
 Mississippi State Geological Survey Bulletin No. 16.
 Interrelations of the Fossil Fuels, by J. J. Stevenson. Proceed. Amer. Phil. Soc. Vol. 55-59.
 Synopsis of Mineral Characters, by R. W. Richards.
 American Red Cross. Typhus Fever—Serbian Epidemic.
 Bureau of American Ethnology. Bulletin 72.
 Canada Commission of Conservation—Canadian Oyster.

Pamphlets.

- Armour Institute of Technology, May, 1921.
 Cleveland Museum of Arts, December, 1919-May, 1921.
 Notes on Life Histories of Illinois Fish. By T. L. Hankinson. (Reprint Trans Ill. State Acad. Sci., Vol. XII.)
 The Rockefeller Foundation. A Review for 1920.
 Notes on Two Genera of Ectoparasitic Trematodes. H. J. Van Cleave.
 Acanthocephala collected by the Swedish Expedition to the Juan Fernandez Islands. H. J. Van Cleave.
 Acanthocephala Parasitic in the Dog. H. J. Van Cleave.
 Sexual Dimorphism in the Acanthocephala. H. J. Van Cleave.
 Report of the Canadian Arctic Expedition, 1913-18. H. J. Van Cleave.
 Notes on Life Cycle of Two Species of Acanthocephala, 1920. H. J. Van Cleave.
 Two New Genera and Species of Acanthocephalous Worms. H. J. Van Cleave.
 The Orchard Birds of an Illinois Summer. Bull., Vol. XIV, Art. I. Div. Nat. Hist. Surv., June, 1921.
 Forest Insects in Illinois. Bull., Vol. XIII, Art. XIV, Div. Nat. Hist. Surv., January, 1921.
 The Small Bottom Shore Fauna of the Middle and Lower Illinois River. Bull., Vol. XIII, Art. XV, Div. Nat. Hist. Surv., June, 1921.
 Distribution of the Fresh-water Sponges of North America. Bull., Vol. XIV, Art. II, Div. Nat. Hist. Surv., June, 1921.
 The Fowl Tick. Farmers' Bull. 1070. U. S. Dept. Agr., 1919.
 How to Select Foods. Farmers' Bull. 808. U. S. Dept. of Agri.
 Bulletin du Jardin Botanique, January-May, 1921.
 Carnegie Museum. 24th Annual Report of the Director.
 Occasional Papers. Museum of Zoology, University of Michigan, Nos. 70-75 and 91-103.
 U. S. Geological Survey, Professional Paper, 129 B, March, 1921.
 Fogg Art Museum. From Report of the President of Harvard University, 1919-20.
 Newark Museum Association. Twelfth Annual Report, 1920.
 Detroit Institute of Arts. Bulletin. Vol. III, No. 1.
 U. S. Geological Survey. Mineral Resources, 1917, pt. 1. Metals.
 U. S. Geological Survey. Mineral Resources. Secondary Metals, 1920.
 U. S. Geological Survey. Mineral Resources. Mines Report, Cent. States.
 U. S. Geological Survey. Mineral Resources. S. Dakota and Wyoming.
 U. S. Geological Survey. Mineral Resources. Mines Report, Texas.
 U. S. Geological Survey. Mineral Resources. Feldspar in 1920.
 U. S. Geological Survey. Mineral Resources. Abrasive Materials, 1920.
 U. S. Geological Survey. Mineral Resources. Mineral Waters.
 U. S. Geological Survey. Mineral Resources. Artificial Gas.
 Dept. Registration and Education. Div. State Geol. Surv. Directory. Illinois Mining Operators.
 Preliminary Sketch of the History of the Lower Missouri. (Bull. Geol. Soc. Amer., Vol. 32, 1920.)
 Dept. of Commerce. Bureau of Fisheries, Doc. No. 907. Food of Young Winter Flounders.
 Lewis Institute—Structural Materials Research Laboratory, Bulletin 7, 1920.
 Correlation of the "Wilcox" sand in the Okmulgee, Oklahoma. Bull. Amer. Ass'n. Petroleum Geologists.

- Iowa State Uni. Bull., April 15, 1921. Summer Courses in Geology.
 Combustion. S. B. Richardson.
 Buffalo Society Natural Sciences. Nature Calendar, Vol. 2, Nos. 2 and 3, 1920.
 American Microscopical Society Transactions. Vol. XI, No. 1, January, 1921.
 Die Krone. Nos. 1-23. Dresden.
 Children's Museum of Boston. Eighth Annual Report. Vol. VIII, No. 24.
 Report of the Philadelphia Museums, 1918-1920.
 National Academy of Sciences Proceedings, Vol. V, Nos. 8, 9, 10.
 Bulletin Du Museum National D'Histoire Naturelle. Nos. 1, 2, 3, 4.
 Cincinnati Museum Catalogue, 1920.
 Ohio Agricultural Experiment Station, Bulletin 351.
 Report of the Supreme Court of the United States. Sulphur Fumes from
 Smelters.
 The Effect of Sewage. F. C. Baker.
 The Museum of Natural History of the University of Illinois. F. C. Baker.
 New Forms of Pleistocene Mollusks from Illinois. F. C. Baker.
 Mussel Survey. F. C. Baker and Frank Smith.
 Origin of Graphite. Thos. H. Clark.

BOOKS PURCHASED.

- American Men of Science.
 "Minerva" Handbook.
 Science, Volume LIII.
 Economic Geology, Volume XV.
 National Geographic Magazine, Volume XXXIX.
 American Forestry, Volume 27.
 Art and Archaeology, Volume XI.
 Mining and Scientific Press, Volume 123.
 Geological Magazine, Volume LVIII.
 Popular Science Monthly, Volume XII.
 Seismological Magazine, Volume II.

THE IMMIGRANTS COMMISSION.

The Immigrants Commission was established by the Fifty-first General Assembly through an amendment to the Civil Administrative Code, approved June 10, 1919. This created in the Department of Registration and Education the Immigrants Commission, which was empowered to:

1. Make a survey of the immigrant, alien born and foreign speaking people of the State, and of their distribution, conditions of employment, and standards of housing and living.

2. Examine into their economic, financial and legal customs, their provisions for insurance and other prudential arrangements, their social organizations, and their educational needs; keeping in friendly and sympathetic touch with alien groups and cooperating with State and local officials, and with immigrant or related authorities of other states and of the United States.

The commission was very active during the period covered in this report, but, due to the fact that the appropriation for the biennium beginning July 1, 1921 was vetoed by the Governor, the Commission went out of existence on June 30, 1921, and the offices closed. The officers in charge immediately went into other activities, and for this reason no detailed report is available.

DIVISION OF REGISTRATION.

The receipts in the Division of Registration for the year ending June 30, 1921, were \$106,100.70. These receipts were from the following sources: Architects, \$3,553; barbers, \$19,244; chiropodists, \$1,741; dentists, \$6,081; embalmers, \$4,781; horseshoers, \$5,038; nurses, \$17,178; optometrists, \$3,679; pharmacists, \$25,300; medical, \$11,032; plumbing, \$5,404.70; structural engineers, \$2,349; veterinarians, \$720.

The expenditures from appropriations for the year were \$82,662.77, plus superintendent's salary, \$4,200, leaving the excess of receipts over expenditures \$19,237.93.

There are fourteen laws regulating professions, trades and occupations which are administered by the Division of Registration. They are barbering, architecture, chiropody, dentistry, embalming, horseshoeing, medicine, nursing, optometry, pharmacy, plumbing, structural engineering, real estate and veterinary medicine and surgery; also qualifying certificates are issued. The laws regulating the various professions, trades, and occupations provide for examinations from time to time during the year by professional committees appointed by the Director of the department. A condensed statement of the examinations held during the year is as follows:

ARCHITECTS.

Two examinations for architects were held during the year. At these examinations there were 78 applicants, 44 of whom were successful. At the close of business on June 30, 1921, there was 1,142 registered architects in good standing in the State. Of this number, 1,088 were those to whom renewal certificates had been issued during the year and 54 were original certificates of registration issued during the time covered by this report. This includes a number of applicants who successfully passed examinations prior to July 1, 1920, but who up to that time had not paid the fees for certificates. During the year ending June 30, 1921, the department issued 17 certificates to persons already licensed under the exemption clause of the original act, who presented themselves for examination before the committee for the purpose of changing their registration from "by exemption" to "by examination."

BARBERS.

Forty-nine examinations for barbers were held during the year. Six of these examinations were held in Chicago, four each in the cities of Springfield, East St. Louis, Centralia, Carbondale, Harrisburg, Quincy.

Urbana, Peoria, Moline and Ottawa, and three examinations in the city of Rockford. At these examinations there were 440 applicants, of whom 430 were successful.

At the close of the year there were 14,481 licensed barbers in good standing in the State. This is an increase of 827 over the year ending June 30, 1920.

CHIROPODISTS.

Two examinations for chiropodists were held during the year. In these examinations were 30 applicants, 29 being successful.

Fifty-seven original certificates were issued during the year, including the applicants who took the examination in May and who did not receive their certificates until July 1, 1920.

On June 30, 1921, there were 471 chiropodists in good standing in the State.

DENTISTS.

Two examinations for licensed dentists were held during the year in the city of Chicago, in the months of November, 1920, and June, 1921. The June examination was cancelled after a two days' session and postponed until August 22-25, 1921. During the year covered by this report 162 original licenses were issued by the department. Of this number, 113 were granted to applicants who were successful in the June, 1920, examination, but whose papers were not graded prior to July 1, 1920; 49 were granted to successful applicants in the November, 1920, examination, and five were by reciprocity, which are included in the list.

On June 30, 1921, there were 6,007 licensed dentists in good standing in the State.

EMBALMERS.

Only one examination for registered embalmers was held during the year, in the city of Chicago. There were 69 applicants at the examination, of whom 64 were successful. Three applicants were registered on the basis of reciprocity. On June 30, 1921, there were 3,267 registered embalmers in good standing in the State.

The new Embalming Act, which took effect July 1, 1919, provides that after July 1, 1920, it shall be unlawful for any person to serve or to attempt to serve as an apprentice under a registered embalmer without a certificate of registration as a registered apprentice, issued by this department. All apprentices under registered embalmers were given one year in which to procure registration by this department. During the year, 328 certificates of registration as registered embalming apprentices were issued.

HORSESHOERS.

Sixteen examinations for horseshoers were held during the year, two each in the cities of Chicago, Springfield, Danville, East St. Louis.

Peoria, Benton, and Effingham. At these examinations there were 259 applicants, of whom 171 were successful. During the period from July 1, 1920, to November 30, 1920, there were 28 who were issued renewal certificates for the fiscal year ending November 30, 1920. On July 1, 1921, there were 4,039 registered horseshoers in good standing in the State. This includes 3,868 who were granted renewal certificates and 171 who were granted original certificates during the same period of time.

MEDICAL PRACTITIONERS.

Four examinations for licensed physicians were held during the year ending June 30, 1921, all being held in the city of Chicago, principally on account of the facilities afforded by the Cook County Hospital for the practical test which is required of all applicants. At these examinations, 295 applicants reported, of whom 241 were successful. Applicants on the basis of reciprocity to the number of 79 are included among the 241 successful candidates.

During the year, the department issued 598 licenses to physicians. Of this number, 319 were issued as the result of written examinations, 73 were by reciprocity and 206 temporary licenses, i. e., entitling the applicant to practice in a hospital only. The law does not require annual renewals of certificates issued under the provisions of the Medical Practice Act. It is, therefore, impossible to tell how many physicians there were in good standing in the State on June 30, 1921.

From July 1, 1917, to June 18, 1921, the Department of Registration and Education administered the Medical Practice Act in force July 1, 1917, providing for the registration of physicians and surgeons; those who desired to treat human ailments without the use of drugs and medicine and without operative surgery; and midwives. This act was declared unconstitutional by the Supreme Court on June 18, 1921, since which time the department has been functioning under the Medical Practice Act of 1899 as amended.

OSTEOPATHIC PHYSICIANS.

Four examinations for osteopathic physicians were held during the year ending June 30, 1921, all in the city of Chicago, concurrently with the physicians' examinations. At these examinations 11 applicants reported, of whom 9 were successful.

During the year the department issued 21 certificates to osteopathic physicians.

MIDWIVES.

No applicants appeared during the year ending June 30, 1921, for examination as midwives. However, one license was issued during this period.

REGISTERED NURSES.

Four examinations for registered nurses were held during the year. At these examinations there were 1,103 applicants, of whom 879 were successful. During the year the department issued 902 original certificates of registration, of which 54 were by reciprocity. Of the total number issued, 314 were to applicants who passed successful examinations prior to June 30, 1920, but whose examination papers had not been graded in time to be included in the report of last year. The examination papers of applicants who took the examination in May, 1921, were not graded in time to announce the results in this report.

In the Nursing Act which took effect July 1, 1919, provision was made that every registered nurse who continues in the active practice of her profession shall pay an annual renewal fee of \$1.00. On June 30, 1921, the department had issued 4,238 renewal certificates of registration. On that day there were 4,552 registered nurses in good standing in the State. This includes those who paid the annual renewal fee referred to and those who received original certificates of registration between April 1 and June 30, 1921.

OPTOMETRISTS.

Five examinations for registered optometrists were held during the year. The department issued 62 original certificates to registered optometrists, of which 9 were by reciprocity.

In the Optometry Act which took effect July 1, 1919, provision was made that every registered optometrist who continues in the active practice of his profession shall pay an annual renewal fee of \$1.00. Two thousand one hundred and ninety-nine renewal certificates were issued during the year, making a total of 2,261 registered optometrists in good standing in this State on June 30, 1921.

Twelve original optometry apprentice certificates were issued during the year and 50 renewal certificates.

VETERINARIANS.

Two examinations for veterinarians were held during the year. At these examinations there were 53 applicants, of whom 22 were successful. The law does not require annual renewal of certificates issued under the provisions of the Veterinary Act. It is, therefore, impossible to tell how many veterinarians there were in good standing in the State on June 30, 1921.

PHARMACISTS.

Four examinations for registered pharmacists and assistant pharmacists were held during the year. At these examinations there were 602 applicants for registered pharmacist, 314 for assistant pharmacists, and 10 for local registered pharmacists; this includes the applicants who took the examination in June, 1920, whose papers were not graded in time to be included in the report of the previous year.

During the time covered by this report the department issued 394 original certificates of registration as registered pharmacists, including 106 by reciprocity and six local certificates. The department also issued 171 original assistant pharmacist certificates during the year.

On June 30, 1921, there were 6,229 registered pharmacists, 375 local registered pharmacists, and 964 assistant pharmacists in good standing in the State.

During the year 1,076 apprentice certificates were issued.

PLUMBERS.

The Illinois Plumbing Law provides that examinations of applicants for registration as master and journeyman plumber shall be held throughout the State by the various local boards of examiners. The department has no jurisdiction whatever over these boards, which are appointed by the mayor and approved by the city councils in cities of 10,000 population or more. However, we do suggest examination dates, and furnish questions to be used in examinations whenever requested to do so by the boards, in order that the examinations throughout the State may be uniform.

The law provides that the fee for the examination of an applicant for master plumber shall be \$50.00 and for an applicant for journeyman plumber \$1.00. An annual renewal fee of \$10.00 for master and \$1.00 for journeyman plumbers is required.

The law provides that all master plumbers and journeyman plumbers holding certificates issued by local boards of examiners and who do not reside within the corporate limits of cities having local boards of examiners shall pay an annual renewal fee to the department. By rule of the department, these annual renewal fees are due January 1 of each year, and all certificates issued expire on December 31 of each year.

From July 1, 1920, to June 30, 1921, inclusive, the department issued 499 renewal certificates to master plumbers and 366 to journeyman plumbers. The department has no record of the total number of certificates issued by the various local boards of examiners throughout the State during this period.

REAL ESTATE.

The Fifty-second General Assembly enacted a law regulating the licensure of real estate brokers and salesmen, becoming operative January 1, 1922, and under the provisions of this act any one who deals in real estate as a broker or salesman, accepting commissions, is required to be licensed in this State through this department.

STRUCTURAL ENGINEERS.

Three examinations for structural engineers were held during the year. At these examinations there were 67 applicants, of whom 52 were successful. At the close of business on June 30, there were 795 registered

structural engineers in good standing. Of this number 752 were those to whom renewal certificates had been issued during the year and 43 had original certificates issued as the result of the examinations.

QUALIFYING CERTIFICATES.

Qualifying certificates are issued by the Department of Registration and Education under the direction of K. A. Fries, Assistant in Professional Education.

During the year ending June 30, 1921, qualifying certificates were issued to 3,639 applicants, thereby approving their preliminary education for admission to approved schools of medicine, drugless healing, dentistry, pharmacy, optometry, chiropody and nursing.

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